Home Computing WEEKLY

An Argus Specialist Publication

July 12-18, 1983

No. 19

38p

INSIDE

Behind the scenes at English Software

Great games to type in for: TI-99/4A, Spectrum, Dragon, ZX81

Software reviews for: Lynx, TI-99/4A, VIC-20, BBC, Atari, Oric, Dragon, Jupiter Ace, Spectrum

Create more characters with your VIC-20

Drawing with the Oric

Best sellers: charts for VIC-20, ZX81, Spectrum, Dragon

CRASH FAKED IN SPECTRUM RAID

COMPUTERS have been fished out of the Thames — days after armed raiders got away with a £390,00 haul

They staged a car crash to lure the security guard from a London warehouse

He was inside the TNT warehouse, on the Cranford Lane Industrial Estate, Hornsey, chatting to the estate manager when they heard a crash outside.

A car with a girl at the wheel and a main passenger had crashed into dustbins

The two men went to their aid — and found themselves facing a shotgun and a handgun held by two other raiders who had been waiting nearby

One of them said "Blow them away it will save time later"

In fact no shots were fired and, as the car drove off at high speed, the guard and the manager were forced back into the warehouse

They were made to get into the back of a truck which was then reversed against a wall, trapping them

Meanwhile the three robbers loaded up two other TNT trucks with computers — mostly 48K Spectrums in boxes of 10, plus ZX81s and some software The trucks, both orange coloured Ford Cargos, were later found abandoned

The two trapped men shouted and banged on the sides of the truck until they were heard by passers-by and released

The haul, worth £390.000, belongs to Prism, Sinclair's sole distributor in this country It was

Continued on page 3

New Ataris — see inside

An amazing collection of exciting games for VIC20 and ZX Spectrum
Spectrum Games
061-832 9143
FREEPOST
MANCHESTER
Available from all good software dealers and major department stores
Spectrum games by name

Best for software — every week

"IT LOOKS NICE BUT WHAT THE HELL CAN I DO WITH IT?"

Every ZX SPECTRUM Print'n'Plotter Jotter has [illegible] pages of finely [illegible] grids.

50 for the high resolution screen. 50 for the normal character screen.

With these at your disposal you can plan [illegible] any programme [illegible] out to program into your computer.

[illegible]

[illegible]

And there's another bonus, because each page includes 24 User definable grids — 100 per pad.

With [illegible] pages of PLOT grids, [illegible] pages of PRINT grids, [illegible] [illegible]

"NOW WHICH KEY DO I PRESS TO SHOOT DOWN THE THING FROM MARS?"

Ever forgotten which key to press when playing a game?
Do you suffer from a mind-boggling mass of programmed keys?
Do you write programs that use different keys to perform various functions? If so, we have just the thing for your ZX SPECTRUM.

A pack of Print'n'Plotter Keyboard Overlays.

Just write the function or functions under each key you program and keep the overlay for the next time you play the game.
Of course there's lots of more uses you will find for our OVERLAYS, user defined characters, keyboard scanners, mathematical programs, business uses — to name just a few.

There's TEN OVERLAYS in a pack — so you can program with impunity! And they fit perfectly onto your standard ZX SPECTRUM KEYBOARD. Each OVERLAY is printed with the cursor movement key directions and there's room for program name etc.

A SPECTRUM CONSOLE THAT EVERYONE CAN AFFORD!

For the cost of a 'game' [illegible] you can have a truly professional console for your SPECTRUM.

[illegible]

The result is a console that's tough, light, highly finished and capable of giving years of useful service.

[illegible] Fully illustrated instructions are included.

"PRINTER PAPER THAT WORKS? I DON'T BELIEVE IT!"

**Five rolls of our PRINTER PAPER will only cost you £12.50 including postage, packing and VAT! And you'll gain a great deal more!
It prints beautifully. It's not too thick. It's not too shiny. Print is black — not grey. It actually feeds through the machine!
See for yourself only £12.50 including everything. It's a bargain!**

Post today to Print 'n' Plotter Products, 19 Borough High Street, London SE1 9SE or phone 01 403 6644 (General) or 660 7231 (Credit Card Sales)

Name

Address

ZX SPECTRUM JOTTER @ £9.95 each
ZX SPECTRUM KEYBOARD OVERLAYS @ £2.95 per pack
ZX SPECTRUM CONSOLE @ £5.25 each
ZX PRINTER PAPER @ £12.50 per five rolls
ZX SPECTRUM DEMO CASSETTES @ 95p each
ZX81 JOTTER PADS @ £3.50 each
ZX81 FILMS @ £2.25 each
ZX81 GRAPHICS PROGRAMMING GUIDE @ £1.50 each

Remittance enclosed. Please bill my Access/Barclaycard/Visa/Mastercard No

Print'n'Plotter Products

All prices include VAT, P&P. Overseas orders please add 25% for additional surface mail.

H

"WHERE CAN I GET THEM?"

[illegible]
W H Smith [illegible]
Bootstrap [illegible]
Buffer Micro [illegible]
Microware [illegible]
Games [illegible] London EC1 01 253 6423
Personal Computer Services [illegible]
Technomatic [illegible]
Georges [illegible] Bristol (0272) 276602
[illegible]
Northampton Home Computer Centre [illegible]
Philip Copley [illegible] Ossett W. Yorks [illegible]
Darlington Computer Shop Darlington [illegible]
Lancashire [illegible] Lancs [illegible]
North East Computers [illegible]
[illegible] Hereford [illegible]
Computers for All Romford [illegible]
Marco Software Sawbridgeworth Herts [illegible]
Evesham Micro Centre Worcs [illegible]
Computer City [illegible]
Landau Electronics Sutton 01 643 [illegible]
C&J Computers [illegible]
Software Machine London [illegible]
Screen Scene Cheltenham [illegible]
[illegible]
[illegible]

Educational Suppliers through Griffin & George Ltd
[illegible]

CONTENTS **July 12-18, 1983 No. 19**

A Prophecy:-
MAD MARTHA II
will be coming to get you
SOON !!!
Call (0384) 27317 for info

Continued from front page

in the warehouse awaiting despatch to retailers throughout the country.

Prism's deputy managing director Terry Brown said: "It means there won't be as many retailers holding stocks as there could be.

"We have got to try and get extra stocks so we won't build up a lead time. My advice to customers is to shop around or go back to the store later."

He said: "They loaded up the lorries very inefficiently. They left at least 2,000 computers behind when they could have taken everything that was in the warehouse."

Prism, which was insured for the loss, distributes to most UK retailers, excluding a handful of large chains like W. H. Smith, Greens and John Menzies, which are supplied direct by Sinclair Research.

Five days later £1,730 worth of computers were found submerged in the Thames in Buckinghamshire by two boys out fishing.

There were 13 Spectrums, a ZX81 and a single power pack in two plastic bags. All were ruined.

Police are checking to see if there is any connection and an officer said: "Things are developing."

The Oric collection

Home Computing Weekly contributor Vince Apps has just brought out a collection of programs to keep Oric owners busy.

The Oric 1 Program Book contains 50 program listings which, according to the publishers, will allow those dedicated enough to type them all in to run an obstacle course, protect six cities from missile attack, save a maiden from a dark knight, draw graphs, weave webs, have a firework display, peek into the Oric's memory.

The book costs £6.50 direct from the publishers.

Phoenix Publishers, 14 Vernon Road, Bushey, Herts

Home Computing WEEKLY

News 5,7,9

TI-99/4A program 11
Save Miss Muffet from the spider

Software reviews 13
Programs that teach you to put two and two together

Software reviews 14
Versions of the classics

Spectrum program 17
The fate of the fleet depends on you

Dragon program 21
Prepare those plasma bolts

Software reviews 23
These games are all up in the air

VIC-20 programming 25
Reformed characters

Software reviews 29
Messing about with your micro

Oric-1 programming 30
You too can be quick on the draw

Spectrum software reviews 33
Aliens on the warpath

VIC-20 software reviews 35
New games you could play

ZX programs 36
Train your brain

Best sellers 38

U.S. Scene 38

Letters 41

Profile: English Software 43

Acting Editor
Paul Liptrot
Assistant Editor
Candice Goodwin
Designer
Bryan Pitchford
Managing Editor
Ron Harris

Advertisement Manager
Coleen Pimm
Assistant Advertisement Manager
Barry Bingham
Classified Advertising
Bridgette Sherliker
Managing Director
Jim Connell

Argus Specialist Publications Ltd
145 Charing Cross Road, London WC2H 0EE 01 437 1002

Home Computing Weekly is published on Tuesdays. Distribution by Argus Press Sales and Distribution Ltd, 12-14 Paul Street, London EC2A 4JS. Printed by Alabaster Passmore & Sons Ltd, of London and Maidstone, Kent. Design and origination by MM Design and Print, 145 Charing Cross Rd, London WC2H 0EE

FREE ZX81
CATALOGUE
12 pages of the best
programs for 16K ZX81
call 24 hours
leave name, address
clearly 01-789 8546
Software Supermarket

Dragon crosses the ocean

The Dragon-32, which was launched in the UK only last August, is now to be sold across the Atlantic.

Dragon Data has just signed an agreement with New Orleans-based company Tano to market the Dragon in the USA, Central and South America and the Caribbean.

Dragon Data, Kenfig Industrial Estate, Margam, Port Talbot, West Glamorgan

Cartridge price cuts

The retail price of Thorn EMI software cartridges for the VIC-20 and Atari 400/800 micros can be expected to fall, now that Thorn has cut the price it charges dealers.

Cuts of £5 per cartridge on the trade price will probably mean that retail prices will fall to under £30.

Thorn EMI, Upper Saint Martin's Lane, London WC2H 9ED

LATE NEWS

Oric joins price cutters

Price of both Oric computers have been slashed. The 48K model has been cut by £30 to £139.95, and the 16K version returns to its launch price of £99.95. Oric said that 80,000 Oric 1s have been sold in the UK and Europe, and a TV campaign was starting.

Buyers will also get a £40 voucher towards the cost of the Oric four colour printer plotter.

QUEST

FOR ANY SPECTRUM

SIMPLY THE BEST

THE BLACK HOLE

THE SCENE: Alien spacecraft are using hyperspace drive to enter our universe through a black hole. Their intent is destruction.
YOUR MISSION: To uphold the defence of your universe as long as possible while inflicting the maximum damage on alien forces.
YOUR WEAPONS: Positive and Negative Ion Guns are deadly at any range but the ion stream is bent by the massive gravitational field of the black hole. The Neutron Blaster is equally deadly but has only limited range.
YOUR BATTLE: You are under constant attack from the alien force which pits fiendish offensive craft against you in ever increasing intensity in deadlier and deadlier form.
How long can your fleet of ships survive? How many enemy craft can you destroy?
100% super efficient machine code allows all this action to be packed in to run on the 16K (or 48K) Spectrum. Superb animation, high resolution graphics, incredible explosions and full sound effects combine to make "Black Hole" set a new standard in Spectrum software.
Also features a special learning mode to help develop your skills.
Embedded in the software is our unique score validifier which enables us to introduce a new dimension to computer games. The top ten scorers in each calendar month from April through September will receive a "I'm a Black Hole addict" T-shirt and the chance to compete for prizes to the value of £500 in a championship to be held at the end of the year. We will then publish a list of the top 100 scorers so you can find out just how good you are.

HOW GOOD ARE YOU? Take up the "BLACK HOLE" challenge NOW and find out. Send £5.50 to QUEST, 119 THE PROMENADE, CHELTENHAM, GLOS GL50 1NW to receive your copy of "BLACK HOLE" by return first class post together with a membership number entitling you to discount on our forthcoming blockbusting software.

Trade enquiries welcome
excellent terms available
Tel: Cheltenham (0242) 583661

THE TOP 6 SCORERS AT THE END OF JUNE ARE

RUSSELL CAPEL	2530	IAN GARLINGE	1847
MRS K BURNETT	2019	STEVE EDWARDS	1670
DAVID BAXTER	1988	T SWIFT	1513

NEWS

Atari games for other computers

Atari is coverting its computer games to run on other micros, starting with cartridges for the TI-99/4A, VIC 20 and Commodore 64.

The first three — Pac Man, Centipede and Defender — will be on sale by the end of the year. More Atari cartridges are also due out soon.

Steve Gerber, 37, Atari's European software development director, who has just arrived at the company's UK base in Slough, explained the new policy.

He said: "It was the Warner Corporation (Atari's owners) who made the final decision. We had been trying to persuade them to do this for some time.

"After all, if you're good at making software, why limit yourself to one machine?"

But would this mean people may choose to buy other computers? Mr Gerber said: "If you found the best software for, say, the VIC was from Atari, would you not just buy the Atari?"

More adaptions would be coming for the BBC micro, Dragon and the Spectrum, all on tape instead of cartridges.

He said: "We are also about to launch a UK product written by a UK author. This kid just walked in the door with a dynamite game."

The Software Publishing Group was also on the lookout for more UK written software which would, if suitable, be marketed in America as well as other countries where Ataris are sold.

New software for cartridges due out this year.

- Pole Position, a grand prix motor racing game costing £29.99 and on sale in September.

- RealSports Tennis, in the shops this month, uses the same rules as real tennis — and the players even change ends after games. Price £19.99.

- AtariWriter, a word processing program which, says Atari, offers features usually found in expensive software.

- Games for children based on Walt Disney characters and cartoon films.

Atari also showed its new computes and peripherals for the first time in the UK. Prices have not yet been decided, but they are due here this year.

Details were in last week's Home Computing Weekly, but they included the 16K RAM 600XL and 64K 800XL home computers. They are compatible with existing software and, unlike the present models, have BASIC built in. The top of the range 1450XLD, which is to go on sale here next year, has a built-in dual density, double sided 5¼in disc drive.

Other new products include three printers — the 1020 using ballpoint pens in 4½in paper rolls, the 1025 80-column dot matrix printer, and the 1027 letter quality printer running at a claimed 20 characters per second.

There is also a re-styled 1010 program recorder, 1050 disc drive, a module for the CP/M 2.2 operating system — used for much business software — which also adds 64K of RAM and switchable 40 or 80 column video output, and a box called The Expander with slots for eight expansion cards and two RS-232C and one Centronics interface.

The Expander for the new XL computers only is designed to accept products from other manufacturers.

Janice Gash, 25, with the new 800XL home computer from Atari

Atari's new 600XL computer

Fire bugs cause £10,000 damage

Fire raisers caused a £10,000 blaze at a leading software and add-on company. And one theory is that they were teenagers angry at not finding any money.

The man who called the emergency services — a quantity surveyor working late in an adjoining office — has been thanked with a bottle of Scotch and the offer of a free meal.

The gift was from Roy Backhouse, managing director of Fuller Micro Systems, based in central Liverpool.

Mr Backhouse said: "Police think it was teenagers looking for money. They smashed the front window to get in at about midnight on Saturday.

"They couldn't find any money — so they set fire to the place. The fire brigade believe they set fire to a wastepaper basket."

Among the property, all insured, which was damaged was software, desks and files. A printer and a terminal were damaged by smoke, but the company's ICL computer was on another floor and not affected.

All 14 people employed by Fuller worked over the weekend to ensure orders were kept up to date.

Mr Backhouse said: "Even though we managed to salvage a lot of test gear it still stinks of smoke.

"It's an absolute pain that anyone could be so senseless. There was a lot of blood, so they must have cut themselves getting in.

"We probably would have lost the whole place but for a guy working late who heard the glass being broken and called the police."

The fire affected only the ground floor of Fullers, which includes showroom, reception area and repairs and servicing.

Microdrives 'imminent'

The launch of the long-awaited Microdrives mass storage devices is now imminent, according to a Sinclair Resarch official.

Sinclair has said little about the Microdrives, except that they are likely to cost around £50 and will need an interface.

GREAT NEW SOFTWARE DEAL

BUY 'N' TRY

HOT-SHOTS

The latest list of best selling titles drawn from ous database covering national trends

ATARI	
Zaxxon	£31 40
Choplifter	£29 95
Shamus	£29 95
Miner 20 49er	£29 95
Preppie	£21 99

B.B.C.	
Planetoid	£9 95
Killer Gorilla	£7 99
Moon Raider	£7 99
Rocket Raid	£9 95
Music Processor	£14 95

COMMODORE 64	
Gridrunner	£9 50
Attack of Mutant Camels	£8 50
Pakacuda	£5 99
Matrix	£8 50
Centropods	£5 99

SPECTRUM	
3D Tanx	£4 95
Timegate	£8 95
Arcadia	£5 50
Krazy Kong	£5 50
3D Combat zone	£4 95

VIC 20	
Tornado	£5 95
Trader	£14 95
Boss	£14 95
Choplifter	£29 95
Arcadia	£5.50

ZX81	
Trader	£9 95
Flight Simulations	£5 95
QS Scramble	£3 95
Mazogs	£10 00
Inca Curse	£5 99

PREDICTION

Call us for details of best sellers for the Dragon, Oric and Lynx

Fastest moving **new** products through Software Centre Two remarkable programs for home and business use, created for the VIC 20 (+16K), Oric 1 Sinclair Spectrum, Sinclair ZX81 (+16K), Dragon and Commodore 64 You too can Buy 'n Try them by completing the order form on the coupon.

CentreSpread SC at £19 95

A fast and flexible spread sheet program providing 'what if' formula variations on columns and lines.

DataBase SC at £19 95

Powerful database management program covering 12 fields and giving an extensive electronic filing system capacity with around 250 records per field, calculation within and between records, and within ranges.

SOFTWARE CENTRE — THE BETTER WAY TO BUY SOFTWARE

128 Wigmore St
London W1
Tel 01–487–5974

30 New Walk
Leicester
0533–532704

426 Cranbook Rd
Ilford, Essex
01–554–6574

112 East St
Southampton
0703–24703

Please add my name to your Buy 'n Try list to keep me right up to date with the latest software news and views through Software Centre's FREE up-dates ☐

Please send me the following programs:

at £

at £

TOTAL £ ______

Cheque ☐ Postal Order ☐ enclosed

Please debit my Access ☐ Barclaycard ☐ in the sum of £

Account No — Signed

My computer is (make) — (Model)

Memory — Peripherals

Name

Address

Telephone No — Please allow 21 days for delivery

SEND TO – SOFTWARE CENTRE, 128 WIGMORE STREET, LONDON W1 TEL 01–487–5974, or your nearest branch.

OVER 1000 TITLES ALWAYS IN STOCK

Choose Software Centre for the widest choice of quality programs And never forget we ensure your satisfaction with our remarkable Buy 'n Try buy-back option.

THE BUY-BACK OPTION

If within one month of purchase the program you bought fails to live up to your expectations, then provided it's in perfect working order, we'll buy it back for 80% of the price you paid against the purchase of another software item of equal of greater catalogue value Send for our list — you know it makes sense

NEW RELEASES

Software Centre keeps you right up to date with the important new releases — including an exciting selection of exclusive programs

LATEST HIT TITLES

Software Centre keeps you in the picture with regular reports on the best selling titles, so you always know the 'hot shot' programs

SPECIAL OFFERS

Software Centre will be making special promotional offers of programs hardware and peripherals Just post us the coupon to make sure you are kept informed.

SHOPS AND MAIL ORDER

Software Centre is growing fast We have shops in Southampton, London, Ilford and Leicester More are planned. If you can't call in person, we'll gladly handle your telephone or mail orders through any branch.

IN YOUR INTEREST

Buy 'n Try makes sure you get what you want, because we know that our reputation relies on your satisfaction. We are not a library, and we discourage copying .. so all programs are sold subject to an undertaking that they will not be copied.

THE ORIGINAL AND THE BEST

Software Centre invented Buy 'n Try We have the experience, the stock a fast growing Dealer network specially commissioned software authors and thousands of satisfied customers. It's a successful formula that should be serving you.

ACTION PLAN

To receive our regular catalogue, details of Software Centre branches special offers, league table of hit software and list of latest releases — just complete the coupon, and post it back to us as soon as possible Or phone your nearest branch.

ZX computing US-style

The ZX81 and Spectrum that we all know and love have undergone a dramatic transformation on their way to the USA

The ZX81 becomes the Timex Sinclair (TS) 1500, and features a silver case, Spectrum-like keyboard and 16K of RAM built in all for around £45

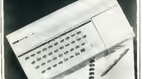
Timex also sells mini cartridges to plug into the expansion slot at the back of the machine

The 48K Spectrum becomes the TS2048 It too has a silver case, plus a special compartment for cartridges and a hole in the side for a joystick

It has five new commands ON ERROR GOTO, RESET, FREE, which tells you how much memory is left, STICK, which controls the joystick, and SOUND, which activites a three channel synthesiser

And the TS2048 can also switch into a second graphics mode giving 64 characters per line. It's selling for the equivalent of around £135

The X81 plus



And there's a 48K Spectrum in there somewhere

Raider upgrader

Arcade Software says that Raider of the Cursed Mine, the Spectrum game it launched at the Earls Court Computer Fair, met with such a good response that it's now bringing out a new improved version

This version, which was being duplicated at the end of last week, will have grade difficulty levels and the option of joystick control

And if you manage to get past level 30 and escape from the mine, you'll be rewarded with a picture of the outside world — complete with moon, stars, trees and a house

Anyone who bought the earlier version of Raider can exchange it for the new one

Arcade Software, Technology House, 32 Chiselhurst Road, Orpington, Kent BR6 0DG

A to Z of software

When you've been from Arcadia to Zip Zap and Zzoom, what do you do for an encore? The two Zx are the titles of Imagine's first two games for the 48K Spectrum, and they'll be in the shops soon

Zip Zap puts you in control of a defective robot, trying to gain the safety of a Tele Portal in the face of opposition from waves of aliens

Its author is a new arrival at Imagine, Ian Weatherburn, who joined the company in April But Eugene Evans' position as 17 year-old programming prodigy is safe — Ian is all of 19

Zzoom is a game with a more familiar theme — rescuing marooned refugees from an enemy intent on wiping them all out. It was written by the grand old man of the company 36-year-old John Gibson, author of Molar Maul

Artistic advice on the games was provided by Gary McNamara, 18, and Steve Blower 33, from Imagine's very own studio, Studio Sting

Both games will be packaged in Imagine's new style cassette boxes Not only that, but the Zzoom boxes even have a Latin inscription — Nomen Ludi, or "the name of the game" to you They'll sell for £5 50, like the rest of Imagine's range

But there's no need to feel inferior if you don't understand Latin — neither does Imagine The motto was translated for them by the Classics department at Merchant Taylors' School Liverpool

And the answer to the original question could be that the company plans to start again from A Launched along with Zip Zap and Zzoom is a version of Arcadia for the Commodore 64, re written and enhanced by Eugene Evans himself

Imagine, Masons Buildings Exchange Street East Liverpool L2 3PN

You could be on our pages

We welcome programs articles and tips from our readers

PROGRAMS should, if possible, be computer printed to a width of 48 characters (use a new ribbon) and/or sent on cassette Check carefully that they are bug-free Include details of what your program does, how it works, variables you have used and hints on conversion

ARTICLES on using home computers should be no longer than 2,000 words Don't worry about your writing ability — just try to keep to the style in HCW Articles most likely to be published will help our readers make better use of their micros by giving useful ideas, possibly with programming examples We will convert any sketched illustrations into finished artwork

TIPS are short articles, and brief programming routines which we can put together with others Your hints can aid other computer users

Competitive rates are paid

Keep a copy of your submissions and include an SAE if you want them returned Label everything clearly and give a daytime and home phone number if you can

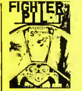
Paul Liptrot, Home Computing Weekly, 145 Charing Cross Road, London WC2H 0EE

6 NEW GAMES FOR YOUR commodore 64

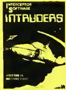
INTERCEPTOR MICRO'S

PRESENTS

SEND S.A.E.
FOR FULL LIST OF GAMES



2 NEW GAMES FOR YOUR ATARI 400/800–16K



NEW GAME FOR YOUR BBC MODEL B

NEW VIC 20 GAMES

Mr Mrs Miss ……………………………………
Address ……………………………………

Quantity	Item		Total		Item		Total
	Scramble 64	£7.00			Galaxzions VIC 20	£5.00	
	Star Trek 64	£7.00			Fantazia VIC 20	£6.00	
	Frogger 64	£7.00			Crazy Kong VIC 20	£6.00	
	Panic 64	£7.00			Frog VIC 20	£4.00	
	Crazy Kong 64	£7.00			Alien Attack VIC 20	£6.00	
	Spriteman 64	£7.00			Vic Rescue VIC 20	£5.00	
	Fighter Pilot Atari	£7.00			Penny Slot VIC 20	£4.50	
	Wordhanger Atari	£5.00					
	Intruders BBC	£5.00					
	Jupiter Defender	£6.00			P&P	50	
					Total		

Send Cheque/P.O. with Order to Interceptor Micro's Lindon House The Green Tadley Hants

Postage & Packing 50p

HCW19

STOP PRESS NEW VIC 20 FALCON FIGHTER STOP PRESS STOP PRESS
ONLY £6.00

NEWS

Lock away your micro

Is your family starting to complain about your micro and its accessories taking over the living room? The Micro Tidy from Abacus is designed to get you back in their good books

It comes in two models, to sit on a desk or stand alone, and has lockable compartments for micro and cassette recorder, cassettes, manuals and cables The television stands on top

The basic version costs £60 and the free standing version costs £80

Abacus Marketing Abacus House, 60 Barcourne Worcester WR1 1JA

The Micro Tidy tidies up your micro

ZX computers get a voice

You may not be able to talk to your ZX81 or Spectrum but it will at least be able to talk to you, using the ZXS Speech Synthesiser from Timedata

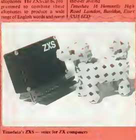
At the heart of the ZXS is the SP 0256 chip which produces basic speech sounds called allophones The ZXS can be programmed to combine these allophones to produce a wide range of English words and some foreign ones

The result can be fed either to an external audio amplifier or to the loudspeaker of a sound box such as Timedata's ZXM

Looking rather like a 16K RAMpack the ZXS has an edge connector to allow other devices to be piggybacked on to it

Timedata reckons that at £32.50 it's the cheapest synthesiser around

Timedata 16 Hemnells High Road Laindon, Basildon, Essex SS15 6ED



Timedata's ZXS — voice for ZX computers

ONE MAN'S VIEW

Give micro addicts a fair dealer

It's a hard life being a computer addict You sit at home typing, or reading specialist magazines like this one, and then — you spot an ad for a new computer shop near your home

Excited at the prospect of trying out that new joystick, or that new game with the super smooth graphics, or just a chat with a fellow enthusiast you rush out at once You return home shortly afterwards, downcast The shop was a washout — no new programs, no joysticks, and a sales assistant who might as well have been selling double glazing

Could this be you? Judging by the letters in the computer magazines, which tell of one sob story after another, I should think it quite likely

○ ○ ○ ○

What on earth is the point of computer shops if people like myself can't try out new products? When even programs can cost around £8 each, us teenagers (who after all constitute the majority of home computers enthusiasts, or so the media would have us believe) with limited budgets can't afford to buy a bad program

It has been debated ad nauseam whether or not software libraries or the Buy and Try scheme provide a solution If our local computer shops were doing their job, this debate would be unnecessary Any program could be tested before being bought

Out of 12 well-advertised stores and specialist shops in my area, not one stocks what the ads say it should or anything like a decent supply of software I live in Harrow, but I buy my software from a shop in Exeter which is helpful, knowledgeable and gives very fast service (four days after ordering three programs, they arrived, with an apology for the delay!)

○ ○ ○ ○

Of course, events such as the Microfairs and the Home Computer Fair fulfill the same function But they're only held from time to time, and not everyone can afford to go to them

Software companies themeselves could help, by giving clearer indications of what the program is like, what language it is written in etc so that customers are less likely to buy a program they don't want

○ ○ ○ ○

For example, I saw the ad for Ultimate's two games, Psst and Jet Pac, and decided against buying them I then saw them at the ZX Microfair, and have since bought them both!

Software houses do themselves as well as their customers a great disservice by advertising their programs in a misleading way as so many (and I don't mean Ultimate now) do For an arcade game to be exciting and fast enough, it really needs to be in machine code — a fact generally accepted by everyone but the smaller software companies But once bitten by a misleading ad, buyers will be twice shy of going to the same company again

In HCW 15, news of GOSH — the Group of Software Houses — was announced I hope that GOSH's members will take note of this plea for improvement Otherwise, I fear that the sudden expansion of the software market will stop, and the trend may reverse Bad dealers and software must not be allowed to be spoil it for everyone else

David Lester
Student
Pinner, Middlesex

- **This space is for you to sound off about the micro scene, to present bouquets or to hurl brickbats Share your views by sending them to Paul Liptrot, Opinion, Home Computing Weekly, 145 Charing Cross Road, London WC2H 0EE Please include your occupation and your interest in computing**

LOOK
MORE CHOICE!
LOWEST PRICES!
SPECIAL OFFERS!
INSTANT CREDIT!

"THE"
MIDDLESEX
MICROCOMPUTER
CENTRE

CHECK OUR STOCK RANGE AND PRICES AND BUY WITH CONFIDENCE

	£		£
SINCLAIR ZX 81	44.00	TEXAS TI/99 4A 16K PACK	146.00
SINCLAIR ZX PRINTER	38.00	COLOUR GENIE 16K	183.00
ZX 16K RAM PACK	28.00	GENIE I 48K	355.00
SPECTRUM 16K	98.00	GENIE II 48K	331.00
SPECTRUM 48K	128.00	EPSON PRINTERS FROM	330.00
ORIC 1 48K + SOFTWARE	168.00	SEIKOSHA GP100X PRINTER	220.00
DRAGON 32K	168.00	SEIKOSHA GP 250X PRINTER	285.00
BBC 'B' 32K	398.00	14" RGB COLOUR MONITORS FROM	
VIC 20 STARTER PACK	138.00	ALL PRICES INCLUSIVE OF VAT	230.00
VIC 20 16K RAM	36.00		
VIC 20 32K RAM	48.00		
COMMODORE 64K	295.00		
ATARI VCS CONSOLE	85.00		
ATARI 400 (INCL. BASIC)	148.00		
ATARI 800 48K	298.00		
EPSON HX 20 16K	399.00		

[illegible]

AGENTS FOR
SHARP OFFICE, MICROFACT, PEGASUS AND MICROSIMPLEX BUSINESS SOFTWARE
BUSINESS HARDWARE SYSTEMS SUPPLIED

SOFTWARE STOCKED FROM RABBIT, ROMIK, IMAGINE, COMMODORE, SINCLAIR, SOFTWARE FOR ALL, GEMINI, DRAGON, MICRODEAL, ELEPHANT, NEW GENERATION, LLAMASOFT, MICROTAX, TITAN, ACORNSOFT, ATARI PLUS MANY OTHERS

MAIL ORDER: PHONE NORTHWOOD 20664 FOR FREE LISTS | P.P. CHARGES TODAY
PERSONAL SHOPPERS, OPEN 6 DAYS A WEEK, EASY PARKING OUTSIDE.
TRADE ENQUIRIES WELCOME. ABSOLUTELY NO MINIMUM ORDER.

ACCESS BARCLAYCARD AMERICAN EXPRESS INSTANT CREDIT

SCREENS
MICROCOMPUTERS
6 MAIN AVENUE, MOOR PARK, NORTHWOOD, MIDDLESEX. TEL. NORTHWOOD 20664
[illegible]

TEXAS TI99/4A

CHALICE
Can you retrieve the golden chalice from the ruined temple
£4·95

BOMBER
[illegible]
£4·95

SORCERER'S CASTLE
[illegible]
£4·95

[illegible]

APEX SOFTWARE
[illegible]

51 MEADOWCROFT, RADCLIFFE, MANCHESTER M26 0JP TEL 061 724 8622

VIC-20 SOFTWARE
QUALITY ARCADE ACTION GAMES FOR THE UNEXPANDED VIC-20

Munch Man Must be one of the best versions of this popular arcade game 3 lives, bonus fruit, power pills and 4 very intelligent ghosts Price only £5 00
Scrambler Race along the alien planets surface bombing the fuel dumps and launching rockets, avoiding the asteroid clouds and mountain peaks Price only £5 00
Galaxions Shoots down the alien invaders, but beware of the swooping attackers Price only £5 00
Asteroyds Your ship is lost in an asteroid field your only hope is to blast the oncoming asteroids Price £5 00
Gun Fight Be quick on the draw shoot your partner before he shoots you a game of skill for 2 players Only £5·00
Super Breakout The old favourite arcade game brought back to life Knock out a full wall to gain another Only £5 00

Cosmic Fire Birds (8K or 16K) This must be the most spectacular arcade action game ever to be produced on cassette for the 8 or 16K expanded VIC 20 As captain of a star ship lost in space you encounter a miraculous force of winged creatures, known to the galaxy as the Cosmic Fire Birds They loop the loop the figure of eight they swoop, they dive, can you survive Full screen display 99 progressive levels of play 5 lives bonus ship at 5,000 points swarmers bombers leaders hawks Price only £9 95
All our games are written entirely in 100% machine code superb colour graphics and sound
Available mail order from the above address
Also available from Micro C Manchester B&B Computers Bolton Micro North Bury and soon all good computer shops

All orders sent by return post   Trade enquiries welcome

Can you save Miss Muffet from the spider?

Poor Miss Muffet. She's been chased by a spider into a labyrinth. It's up to you to guide her to the golden door. Lance Booth wrote this program for the standard TI-99/4A

In this game of luck, skill and judgement, an evil spider has chased Miss Muffet into a labyrinth which is about to fill with deadly green slime. Can you help her to escape in time?

You must guide her — using the four arrow keys with the alpha lock button down — through the labyrinth to the golden door, the only way out.

The spider is patrolling the passages of the labyrinth, spinning webs to block Miss Muffet's escape. Don't let the spider catch Miss Muffet or it will devour her.

Take care not to let her get caught in a web or to touch the walls of the labyrinth which are covered with the spider's venom.

You set your own difficulty level, when line 330 asks for your time limit. This sets the limit at which the program leaves the game loop from line 690, and moves to the out of time routine at line 930. A time limit of 150 could be quite a challenge to start with, even if you get the right breaks.

Once you've had some practice, trying to work down to a limit of 100 becomes an addiction.

A variation on the game, where the spider can be made to move from bottom to top, instead of top to bottom, can be achieved by changing line 490 from FOR SR = 3 TO 23 STEP 2 to FOR SR = 23 TO 3 STEP − 2

Hints on conversion

The program should be convertible for use on any computer with user-defined characters.

CALL CHAR (ASCII code number, hexadecimal string) Defines characters used in the program. The hexadecimal string describes the pattern to be given to the character with ASCII code stated.

CALL HCHAR (row number, column number, ASCII code, number of repetitions) Places character on screen at row and column specified, and repeates it horizontally the number of times stated. If this fourth value is omitted then the character is displayed only once. The character used is the one whose ASCII code appears in the command.

CALL VCHAR (row number, column number, ASCII code, number of repetitions) Works in the same way as CALL HCHAR only repeats vertically instead of horizontally.

CALL GCHAR (row number, column number, numeric, numeric variable) Equivalent of PEEK, assigns ASCII code of character at row and column stated to numeric variable.

CALL CLEAR Clears the screen

CALL SCREEN (Colour code) Specifies screen colour, using colour code.

CALL COLOR (character set number, foreground colour code, background colour code) Specifies foreground and background colours for all characters in set stated.

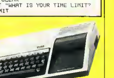
CALL SOUND (duration, frequency, volume) Produces sound with duration, frequency, and volume specified. Duration is in milliseconds, frequency in Hertz (or noise code), and volume in scale from 0 loudest to 30 quietest.

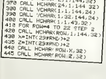
CALL KEY (key unit, k,s) Equivalent of INKEY$ in other computers, returns code if key pressed in variable k

How it works

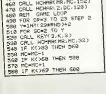
- 130-250 define characters and colours
- 260 sets screen colour to black
- 270-310 assign initial value to variables
- 320 clears screen
- 330 asks for time limit
- 340 clears screen ready for game
- 350-450 display labyrinth
- 460 displays Miss Muffet
- 470 displays Golden Door
- 480-780 main game loop
- 490-770 count down spider movement rows
- 500-510 & 750 control spider's movement along columns
- 520 checks keyboard
- 530 clears old player from screen
- 540-610 check for movement
- 620-660 check new screen positions
- 670 displays new player
- 680 adds one to penalty score
- 690 tests to see if limit is exceeded
- 700-710 check new spider position
- 720-740 move spider
- 760 displays web
- 790-810 touched the wall
- 820-890 eaten by spider
- 900-920 trapped in a web
- 930-990 ran out of time
- 1000-1060 play music
- 1070-1220 escape
- 1230-1250 display message
- 1260-1280 want to play again?

```
110 REM  BY LANCE BOOTH
120 REM  SET CHARACTERS
130 CALL CHAR(41,'FFFFFFFFFFFFFFFF')
140 CALL CHAR(43,"103C7E183C7E1818')
150 CALL CHAR(128,"183C7EFFFFFFFFFF")
160 CALL CHAR(136,"7E5A7E7EA5A5A5A5")
170 CALL CHAR(152,"10187E183C7E2424")
180 REM  SET COLOURS
190 CALL COLOR(13,12,1)
200 CALL COLOR(14,15,1)
210 CALL COLOR(15,10,10)
220 CALL COLOR(16,11,1)
230 FOR I=2 TO 8
240 CALL COLOR(I,3,1)
250 NEXT I
260 CALL SCREEN(2)
270 MR=23
280 MC=16
290 SCORE=0
300 RANDOMIZE
310 DC=INT(29*RND)+2
320 CALL CLEAR
330 INPUT "WHAT IS YOUR TIME LIMIT?
" LIMIT
```

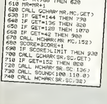




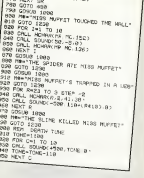
```
340 CALL CLEAR
350 REM  SET SCPEEN
360 CALL HCHAR(2,1,144,32)
370 CALL HCHAR(24,1,144 32)
380 CALL VCHAR(1,1,144,24)
390 CALL 'CHAR(1,32,144,24)
400 CALL HCHAR(1,1,43,32)
410 FOR ROW=4 TO 22 STEP 2
420 CALL HCHAR(ROW,1,144,32)
430 X=INT(29*RND)+2
435 Z=INT(29*RND)+2
440 CALL HCHAR(ROW,X,32)
445 CALL HCHAR(ROW 2,32)
```



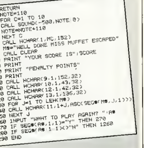
```
450 NEXT ROW
460 CALL HCHAR(MR,MC,152)
470 CALL HCHAR(2,DC,120)
480 REM  GAME LOOP
490 FOR SR=3 TO 23 STEP 2
500 Y=1NT(29*RND)+2
510 FOR SC=2 TO Y
520 CALL KEY(3,K,S)
530 CALL HCHAR(MR,MC,32)
540 1F K<>03 THEN 560
550 MC=MC-1
560 IF K<>60 THEN 500
570 MC=MC+1
580 1F K<>69 THEN 600
```



```
590 MR=MR-1
600 IF K<>08 THEN 620
610 MR=MR+1
620 CALL GCHAR(MR,MC,GET)
630 IF GET=144 THEN 790
640 IF GET=136 THEN 820
650 IF GET=120 THEH 1070
660 IF GET=42 THEN 900
670 CALL HCHAR(MR MC,152)
680 SCORE=SCORE+1
690 IF SCORE>LIMIT THEN 930
700 CALL GCHAR(SR,SC,GET)
710 IF GET=152 THEN 020
720 CALL HCHAR(SR SC 136)
730 CALL SOUND(100 110.0)
740 CALL HCHAR(SR,SC,32)
```



```
750 NEXT SC
760 CALL HCHAR(SR,SC,42)
770 NEXT SR
780 GOTO 490
790 GOSUB 1000
800 M$="MISS MUFFET TOUCHED THE WALL"
810 GOTO 1230
020 FOR I=1 TO 10
030 CALL HCHAR(MF MC,152)
340 CALL SOUND(50,-5,0)
850 CALL HCHAR(MR MC 136)
860 NEXT I
070 GOSUB 1000
800 M$="THE SPIDER ATE MISS MUFFET"
090 GOTO 1230
900 GOSUB 1000
910 M$="MISS MUFFET'S TRAPPED IN A UEB"
920 GOTO 1230
930 FOR R=23 TO 3 STEP -2
940 CALL HCHAR(R,2,41,30)
950 CALL SOUND(-500 110+(R*10).0)
360 NEXT R
370 GOSUB 1000
900 M$="THE SLIME KILLED MISS MUFFET"
990 GOTO 1230
1000 REM  DEATH TUNE
1010 TOHE=1100
1020 FOR C=1 TO 10
1030 CALL SOUHD(+500,TONE 0)
1040 TONE=TOHE-110
1050 NEXT C
```



```
1060 RETURN
1070 NOTE=110
1080 FOR C=1 TO 10
1090 CALL SOUHD(-500,NOTE 0)
1100 NOTE=NOTE+110
1110 NEXT C
1120 CALL HCHAR(1,MC,152)
1130 M$="WELL DONE MISS MUFFET ESCAPED"
1140 CALL CLEAR
1150 PRINT "YOUR SCORE IS";SCORE
1160 PRINT
1170 PRINT "PEHALTY POINTS"
1180 PRINT
1190 CALL HCHAR(9.1,152,32)
1200 CALL HCHAR(10,1,43,32)
1210 CALL HCHAR(12.1,42,32)
1220 CALL HCHAR(13,1,136,32)
1230 FOR J=1 TO LEH(M$)
1240 CALL HCHAR(11,1+J,ASC(SEG$(M$,J,1)))
1250 NEXT J
1260 1NPUT "WAHT TO PLAY AGAIN? ";A$
1270 IF SEG$(A$,1,1)="Y" THEN 270
1280 IF SEG$(A$ 1 1)<>"N" THEN 1260
1290 END
```

ARCADE ACTION - ORIC-1 - ADVENTURES

DINKY KONG

For 48K £6 95

SUPER M/C ARCADE GAME

- Skill Levels, Full Colour, Platforms, Ladders, Fire-balls, Rolling Barrels, Umbrellas, Hearts, Hall of Fame, Sound Effects.

You wont see a better game for the Oric.

***Author — Adrian Sheppard.**

ORICADE

For 48K £6 90 inc

- **Assembler/ Disassembler/ Editor**
- Handles full 6502 mnemonics Features Save & Reload M/C Assembles & Disassembles at any address

You can't program seriously without Oricade

***Author — Adrian Sheppard**

JOGGER

For 48K £6 95 inc

REAL M/C ARCADE ACTION

- 4 Screens Skill Levels, Full Colour, Road, Cars, Lorries River, Crocs, Logs, Hall of Fame, Sound Effects

Perspire your way up the screen

***Author — Adrian Sheppard**

GRAIL

For 48K £6 95 inc

Exciting Graphic Adventure

Where in the Castle Perilous is the Holy Grail? Gather armour and weapons to fight monsters Sell treasure to a trader in exchange for strength potions and wound ointment
Where will the warp take you to? This is a test of skill, luck, logic & intelligence

MORIA

For 48K £6 95 inc

A challenging adventure set in the mines of Moria

- Can you survive encounters with the monsters of Middle-Earth? Will the wizard help you? Are you fated to dies beside the sealed doors? Or have you the power to open them? Unless you find Durins Ring you will never leave the mines alive!

*Now available from branches of Laskeys

*Dealers enquiries welcome — excellent trade terms

*Ask for Severn Software at your local computer store

Please send me your program.
For my Oric 1

I enclose cheque/ P.O for £.

NAME

ADDRESS

Post Code

SEVERN SOFTWARE HCW19
5, School Crescent, Lydney Glos. GL15 5TA

CASSETTE DUPLICATION SERVICE

No order too large or too small. Fast efficient service using only the latest studio equipment
need cassette copies in a hurry?
We can provide a ***super-fast*** service at a slight extra cost try us! We aim to please.
Delivery at cost
Blank C12 Cassette Tapes 34p plus VAT, also Cassette Labels at £2.75 + VAT per 100.

JLC
49 Castle St.,
Barnsley, South Yorkshire, S70 1NT
Phone: 0226 87707

As we try to maintain a fast service we cannot accommodate visitors and telephone enquiries preferred after 6pm.

It's easy to complain about advertisements.

The Advertising Standards Authority.
If an advertisement is wrong, we're here to put it right.
A.S.A. Ltd, Brook House, Torrington Place, London WC1E 7HN.

Legends in their own lifetime

Invaders, Scramble, Defender, Preppie — names that have gone down in microcomputer mythology

Airstrike
Atari 400/800
£14.95

English Software, 50 Newton St,
Piccadilly Manchester

Airstrike seems popular as a demonstration at shows, and I can see why. It's a very good implementation of the arcade game Scramble

There are all the usual objects — rockets, fuel and ammo dumps mine storms, enemy aircraft and airlocks to be blasted through with the famous scramble landscape of rugged terrain and tortuous tunnels. After completing a level, you enter a more difficult one

Your ship has a very positive feel, with missiles and bombs operated by the joystick button and the space bar. Fuel, score, remaining bombs and missiles and ships are all shown during play. The balance of this game is a lesson to others

M E

instructions	70%
playability	90%
graphics	90
value for money	85%

★ ★ ★ ★

Skramble
VIC-20
£5.99

Rabbit, 380 Station Road, Harrow, Midds HA1 2DE

Some of you may have noticed a similarity between the name of this game and that of a popular arcade game. This is no mistake!

Across an alien landscape flies our hero, dropping bombs and shooting things. There is no division of control between the gun and the bomb: fire one and you drop the other

The enemy consist of what appear to be free-standing lavatory buildings with associated winding gear. Later little rockets are launched at our space ship, which seems to be fired, as it is large tanks of the that we must hit in order to keep fuel up

There are some pretty spiders to shoot next, and then the game gets difficult

I liked this game but it is rather flawed by the scoring system. Cumulative score is kept on the screen all through the game and then it disappears

T D

instructions	70%
playability	50%
graphics	90%
value for money	55%

★ ★

Preppie II
Atari 400/800
32K (disc)
£25.49

From Atari mail order companies

Yes folks, he's back. Just when the other micros thought they were catching up, Wadsworth Overcash — America's Number 1 Preppie — is in it again

This time the owner of the Nasty Nine, furious after his defeat, has Wadsworth painting the floor of three mazes, whilst avoiding collision with the obstacles retained from Preppie. In the third and first mazes are numerous giant frogs out for revenge

Preppie II is completely new and once again has incredible music and colour, with a cartoon break between each of the five levels. The hi-res startup screen puts everything else to shame. Simply the best

M F

instructions	
playability	100%
graphics	100%
value for money	99%
	100%

★ ★ ★ ★ ★

Annihilator
VIC-20 £5.99

Rabbit, 380 Station Road, Harrow, Midds HA1 2DE

This is a Defender sub clone and I reckon it's a pretty good one. You know the plot: you're patrolling the rocky terrain of a distant planet when who should appear but etc, etc

Arcade games provide software writers with games to copy but also with impossibly high standards to reach. This time the shortcomings of a little memory have to a great extent been overcome by adaption. The attackers come in waves, and the mobility of the defending space ship is limited

However, this is a very well thought-out game and one that should provide a great deal of pleasure for many of its purchasers. It sounds like a whole arcade of space invader machines gone crazy, but let's not hold that against it

T.D

instructions	45%
playability	78%
graphics	80%
value for money	85%

★ ★ ★ ★

Invaders
Oric-1 £4

Arcadia, Freepost, Swansea SA3 4ZZ

Hasn't Arcadia done well? There really isn't much difference between this and the original arcade game

The game is colourful, with good, if subdued, sound. The control keys are well chosen, and don't require any complicated finger gymnastics when the action hots up

On-screen instructions are good and unstuffy: the game is fully crash-proofed and well presented. The high score flashes and plays a tune when you beat it

R S

instructions	85
playability	80%
graphics	75%
value for money	90%

★ ★ ★ ★

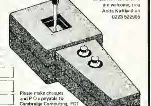
At last! A joystick that works!

Cambridge Computing bring you the first **intelligent** joystick.

Works on all existing software : regardless of which keys the program uses. No need for specially written software. Features include

- Compatible with Spectrum, ZX81, Jupiter Ace
- 2 Independent Fire Buttons
- 8 Directional Microswitched action
- Plugs into edge connector
- Interface complete with edge connector
- Atari joystick compatible
- Joystick with Interface £29.90

Enquiries from dealers are welcome, ring Anita Kirkland on 0223 522905



Name ____________

Address ____________

____

Please send me

____ joystick, interface, and tape @ £29.90 £____
Spectrum☐ ZX81☐ Jupiter Ace☐

____ interface and tape @ £24.00 £____
Spectrum☐ ZX81☐ Jupiter Ace☐

____ joysticks @ £7.00 £____
Spectrum☐ ZX81☐ Jupiter Ace☐

Total including VAT £____

Please make cheques and P O s payable to
Cambridge Computing, PCT
1 Benson Street,
Cambridge CB4 3QJ

CAMBRIDGE COMPUTING

NUMBER ONE FOR THE DRAGON!

DRAGON OWNERS CLUB

The Dungeon is also the home of the largest Dragon Owners Club and publishes the monthly Club Magazine "Dragon's Teeth". News reviews, advice and information exchange for dedicated Dragon bashers. Monthly money saving offers monthly competitions. Club wins from badges to bomber jackets. Free members adverts.

Annual Membership £6.00 (£8.00 overseas) or six month Trial Sub £3.25 (£4.25 overseas.)

DRAGONWARE

The vaults of the Dragon Dungeon are packed with the widest range of Dragon 32 software and peripherals available in the U.K. Send for our 30-page Dragonware Catalogue and kill the myth that the beast lacks programs! (Catalogue 50p refundable order — free to Club Members.)

THE DRAGON DUNGEON
PO BOX 4, ASHBOURNE DERBYSHIRE DE6 1AQ
Tel ASHBOURNE 44626

Introducing

ANIK

Software

The Best for Your Business

PRICE LIST	SINCLAIR ZX81 16K	DRAGON 32 K	SPECTRUM 48 K
PURCHASE LEDGER	£9·95	£12·95	£9·95
SALES LEDGER	£9·95	£12·95	£9·95
COMBINED DATABASE	£9·95	£12·95	£9·95
MICROLYMPICS 1	£9·95	£12·95	£9·95
MICROLYMPICS 2	£9·95	£12·95	£9·95

ALL TAPES COME WITH FREE BACK UP TAPE IN PRESENTATION BOX

SPECIAL OFFER BUY ANY 1 TAPE AT £9·95 AND RECEIVE MICROLYMPICS 1 OR 2 AT ONLY £2·95 (10 ACTION PACKED GAMES ON EACH !)

FOR THESE OFFERS AND MORE DETAILS CUT OUT AND SEND TO

ANIK
30 KINGSCROFT CT
BELLINGE
NORTHAMPTON

TICK WHICH YOU REQUIRE

	16K	32K	48K
Purchase			
Sales			
Database			
Games 1			
Games 2			

Name ____________

Address ____________

Which Microlympics do you require at only £2.95? 1☐ 2☐

TOTAL SUM INCLUDED £

Please make cheques and PO's payable to ANIK MICROSYSTEMS

DEALERS SEND FOR OUR TRADE PACK

ANIK PART OF INTERLEVEL CONTROL LTD

NOW AVAILABLE FROM W. H. SMITH AND BOOTS

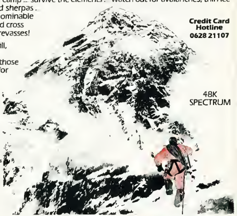
48K Spectrum

EVEREST ASCENT

A graphic simulation of man's ultimate endeavour!

Stake your claim to the Top of the World in this strategic vertical adventure. Aim to conquer the 29,141' summit of the world's highest peak... struggle from base camp to base camp ... survive the elements... watch out for avalanches, thin ice and wayward sherpas... encounter abominable snowmen and cross bottomless crevasses!

A game of skill, strategy and planning for those with a head for heights!



Credit Card Hotline 0628 21107

Only £6.50

48K SPECTRUM

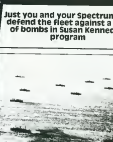
Can you write games like this? If so, why not send a sample — we offer generous cash rewards!

DEALER ENQUIRIES WELCOME — EXCELLENT DISCOUNTS AVAILABLE
WRITE OR RING JOHN SALTHOUSE ON 0628 21107

RICHARD SHEPHERD SOFTWARE
FREEPOST, MAIDENHEAD, BERKS SL6 5BY.

Your mission: save the fleet

Just you and your Spectrum can defend the fleet against a rain of bombs in Susan Kennedy's program



How it works

10-40 set up user-defined graphics
60 initialise best score and score
80-90 POKE system variable to force CAPS lock
110-160 set up array S with ship character
170-210 initialise variables, INK black, PAPER cyan
220-240 draw sea. Note: PRINT 32 spaces
245-300 draw the ships. Note: INK 1, PAPER 5, no BRIGHT and no FLASH, give display character attribute 41 uniquely to the ships
310-360 update scores and initialise target sight X, Y at screen centre
370 compute random bomb start position
395-480 input arrow key presses and move sight accordingly, ensuring sight stays within screen boundary
490 GOTO 1000 if F(ire) key pressed
510 GOTO 2000 if time to move bomb
1000-1040 check for bomb hit and adjust score accordingly
2000-2030 move bomb, accounting for any PAPER change
2040-2160 is ship hit, i.e. bomb coincident with location of attribute 41, then search for which ship and explode it. Subtract 50 from score
2200-2220 if sea bottom reached explode bomb and return to produce new bomb
3000-3030 end of game questions
4000-4060 bomb explosion subroutine

Save the Fleet puts you in charge of a gun sight with which you must aim and shoot down the bombs that are dropping on your fleet of ships

The four arrow keys (5,6,7 and 8) control the gunsight movement with the F key being used for the fire button

The bombs will appear randomly across the screen and at varying heights, thus increasing the uncertainty during the total attack of 50 bombs

Scores in the game are accumulated by intercepting the bomb, with a higher score, the higher up the screen the bomb is hit If you are too slow and a bomb hits a ship then you lose 50 points

In order to maximise the speed of gun-sight movemant whilst maintaining bomb movement and to overcome the problem of the Spectrum screen layout, a few interesting techniques have been employed

The program leaves the gunsight movement loop approximately every 400 msec by testing for a difference of 20 in the least significant time frame byte from the time of the last bomb movement

This is less accurate than using all three time frame bytes, but much faster, and the occasional quick movement of the bomb is not noticeable in the overall effect

The time that could be taken to detect a hit on one of the ships would be slow if one had to search an array of screen locations

This problem is neatly overcome by giving the ships a unique character attribute (41) and as much a hit can be detected by simply checking the attribute of the next bomb position Once a hit has been established there is no longer the need to save time and a search can be made to find which ship was hit

This game is fairly simple in concept and is aimed at showing that by giving thought to time saving an arcade game can be written in BASIC However, providing the time available to moving the gunsight is maintained, many improvements could be made such as

- Slow down bomb movement but increase the number of simultaneous bombs
- Introduce graphic lines of fire from the ships
- Introduce random explosive flashes on the screen aimed at confusing the player

I recommend that you first type in and run lines 10-50, which set up the user-defined graphics This will aid you when typing in the graphic lines in the rest of the program

The graphics are **A** bomb, **B** gunsight, **CDE** ship, **FGH** submarine, **I** explosion

Variables
SC current score
BSc best score
S(5) array of ship locations
T current system time
T2 system time at last bomb move
X,Y target sight screen position
C bomb left count
X2 Y2 bomb screen position
A$ input key pressed

```
  10 REM SET UP USER GRAPHICS
  20 DATA 255,255,66,60,60,24,24
,24,129,66,60,36,36,60,66,129,0,
1,7,7,255,127,63,31,0,196,196,20
7,255,255,255,255,0,128,128,192,
255,254,252,248,0,0,1,1,31,63,31
,15,192,192,132,192,255,255,255,
255,0,0,0,64,240,252,252,240,17,
166,124,62,255,126,92,138
  30 FOR I=32600 TO 32571
  40 READ A: POKE I,A
  50 NEXT I
  60 LET SC=0: LET BSC=0
  70 RANDOMIZE
  80 REM SET CAPS LOCK
  90 POKE 23658,8
 100 BORDER 0
 110 DIM S(5)
 130 DATA 3,9,13,16,26
 140 FOR I=1 TO 5
 150 READ S(I)
 160 NEXT I
 170 CLS
 180 IF BSC<SC THEN LET BSC=SC
 190 LET T2=0: LET C=51: LET SC=
0
 200 INK 0: PAPER 5
 210 LET X=10: LET Y=16
 220 FOR I=19 TO 21
 230 PRINT AT I,0,"

 240 NEXT I
 245 REM DRAW SHIPS-ATTR 41
```

```
250 INK 1
252 PRINT AT 19,3,"▄▄▄"
270 PRINT AT 18,13,"▄▄▄"
280 PRINT AT 19,10,"▄▄▄"
290 PRINT AT 21,9,"▄▄▄"
300 PRINT AT 21,25,"▄▄▄"
310 INK 2: PAPER 7
320 PRINT AT 0,16,"HIGH SCORE="
,SC
330 PAPER 7: PRINT AT X,Y," "
340 LET X=10: LET Y=16
350 PRINT AT 0,0,"      "
360 PRINT AT 0,0,SC
365 REM START POSITION OF BOMB
370 LET X2=(INT (RND*5))+1: LET
Y2=INT (RND*32)
380 LET C=C-1
390 IF C=0 THEN GO TO 3000
400 LET A$=INKEY$
410 IF A$="6" THEN PRINT AT X,Y
," ": LET X=X+1
420 IF A$="7" THEN PRINT AT X,Y
," ": LET X=X-1
430 IF A$="8" THEN PRINT AT X,Y
," ": LET Y=Y+1
440 IF A$="5" THEN PRINT AT X,Y
," ": LET Y=Y-1
450 LET X=ABS X: LET Y=ABS Y
460 IF X>18 THEN LET X=18
470 IF Y>31 THEN LET Y=31
480 PRINT AT X,Y,"X"
485 REM FIRE PRESSED ?
490 IF A$="F" THEN GO TO 1000
500 LET T=PEEK 23672
505 REM TIME TO MOVE BOMB ?
510 IF ABS (T-T2)>20 THEN GO TO
2000
520 GO TO 400
 995 REM TEST FOR HIT
1000 IF X2<>X THEN GO TO 400
1010 IF Y2<>Y THEN GO TO 400
1020 GO SUB 4000
1030 LET SC=SC+INT (100/X2)
```

```
1040 GO TO 330
2000 IF X2>=19 THEN PAPER 5
2010 PRINT AT X2,Y2," "
2015 REM MOVE BOMB
2020 LET X2=X2+1
2030 IF X2=18 THEN PAPER 5
2040 IF ATTR (X2,Y2)<>41 THEN GO
 TO 2180
2050 REM HIT SHIP BUT WHICH ?
2060 FOR I=1 TO 5
2070 FOR J=0 TO 3
2080 IF Y2=S(I)+J THEN GO TO 211
0
2090 NEXT J
2100 NEXT I
2105 REM EXPLODE SHIP
2110 FLASH 1: BRIGHT 1: INK 2
2120 PRINT AT X2,S(I),"***"
2130 BEEP 1,1
2140 FLASH 0: BRIGHT 0: INK 0
2150 PRINT AT X2,S(I),"   "
2160 LET SC=SC-50
2170 PAPER 7: GO TO 330
2180 PRINT AT X2,Y2,"*"
2190 LET T2=T
2195 REM TEST FOR SEA BOTTOM
2200 IF X2<>21 THEN PAPER 7: GO
TO 400
2210 GO SUB 4020
2220 PAPER 7: GO TO 330
3000 PRINT AT 5,0,"PLAY AGAIN (Y
 OR N)"
3010 IF INKEY$="Y" THEN GO TO 17
0
3020 IF INKEY$="N" THEN NEW
3030 GO TO 3010
3995 REM BOMB EXPLOSION
4000 FLASH 1: BRIGHT 1: INK 2
4010 PRINT AT X2,Y2,"*"
4020 BEEP .5,1
4030 FLASH 0: BRIGHT 0: INK 0
4040 PRINT AT X2,Y2," "
4050 RETURN
```

Please send ... post & packing HCW1V

Name ______ Address ______

Mikrogen, Dept A1, 24 Agar Crescent Bracknell Berkshire RG12 2BX
Access or Visa Card holders telephone (0344) 27317 (9am 6pm)

Are your finances driving you mad?

Do you find that working out your finances makes your head buzz? Do you see red?
Don't worry now you can have Hilton's **Personal Banking System** on your side giving you a clear head start and (hopefully) putting you back into the black!
Maintain permanent records and fully detailed statements of your finances including
- **All** cheque book transactions and bank receipts
- **All** standing order payments **Automatically Processed** (monthly quarterly six monthly or annually **and** for set number of payments)

In addition the ability to search, locate, delete or correct previous entries. List by category facility is included. Additional **Bank Reconciliation** module available to automatically match your Bank Statement to your **Personal Banking System** account.
Full instructions included and **guaranteed** after sales maintenance provided
- **PBS ZX81 £6.95 (16K)**
- **ZX SPECTRUM £9.95 (48K)**
- **DRAGON £9.95 (32K)**

Bank reconciliation (for use with above) £5.

[illegible]

HILTON COMPUTER SERVICES

Hilton Computer Services Ltd
14 Avalon Road
Orpington Kent BR6 9AX

• YOUR PBS IS NEVER OUT OF DATE •

These games should be available from **W H SMITH, JOHN MENZIES, BOOTS**, other larger department stores and all major software retailers. alternatively send the coupon to ULTIMATE PLAY THE GAME for immediate dispatch, subject to availability you should receive your order within 3 days of posting

£5.50 each

Post this coupon now to ULTIMATE PLAY THE GAME The Green Ashby de la Zouch, Leicestershire, Le6 5JU

Please send me the following

☐ **JET PAC** ☐ **PSSST**

☐ **KEMPSTON** Joystick Information

I enclose PO/cheque for £

Name

Address

WINDOW ON ANOTHER WORLD

NEW RELEASES FOR DRAGON 32 FROM

Salamander Software

FRANKLIN'S TOMB £9 95
Franklin's Tomb is an adventure for one player Can you as Dan Diamond solve the riddle of the cryps, or will you fall prey to its mystery as so many other before you Franklin's Tomb comes complete with a 20 page fully illustrated case file

EVEREST £7 95
Nestled on the border between Tibet and Nepal, the highest mountain in the world Everest Goddess Mother of the world towers five and a half miles above sea level In 1953, Sir Edmund Hilary and Sherpa Tenzing Norgay were the first men to conquer the unconquerable Now you have the chance to scale the summit of Everest, Lhotse or Nuptse Will your attempt end in tragedy, or will your name live forever in the annals of mountaineering history

GRINDRUNNER £7 95
By the year 2190 the Earth is a barren and desolate wasteland. With all natural resources used up, the human race's last hopes rest with a huge orbiting solar power station known as GRID Now the GRID has been invaded by a race of evil droids from Froglax V, intent on the total subjugation of Earth To combat these droids an incredibly powerful and manoeuverable ship the Gridrunner was developed Your mission stop the droids and save the Earth! Gridrunner is an arcade game requiring 1 joystick

DRAGON 32 and TANDY 32K (please specify)
Dragon Trek £9 95 Wizard War £7 95 Golf £7 95 Grand Prix £7 95 Vulcan Noughts & Crosses £7 95 Games Comp 01 £7 95 Salamander Graphics System £9 95 Super Skill Hangman £7 95 Star Jammer £7 95 Nightlight £7 95

BBC MODEL B
Dragon Rider £7 95 Tanks! £7 95 Games Comp B1 £6 95 Games Comp B3 £6 95 EDG Graphics (tape) £24 95 EDG Graphics (disc) £29 95
ORIC 1 Oric Trek £9 95 Games Comp 01 £7 95

NOW AVAILABLE AT MAJOR BRANCHES OF

Boots AND spectrum

Mail Order (add 50p p&p) and Catalogue (send SAE) from
Dept C SALAMANDER SOFTWARE 27 Ditchling Rise Brighton
East Sussex BN1 4QL Tel 0273 771942

HCW19

Salamander Software

Plasma bolts at the ready

Those aliens are at it again. See how many you can blast into oblivion in Brian Hughes' game for the Dragon

The object of Dragatak is to shoot down as many aliens as you can as they try to move erratically up the screen and past your space station

You have control of horizontal movement through the right hand joystick, but don't get too close as you shoot or you may collide!

You score 100 or more points for each alien you destroy depending on how far away they are when you hit them

The game ends when

- Ten aliens have got past you or
- You have run out of plasma bolts or
- You collide with an alien

There is a continuous read-out at the bottom of the screen showing, from right to left, the number of lives the aliens have left, your current score, and the number of plasma bolts you have left

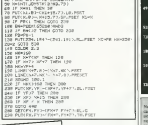
Variables

Arrays

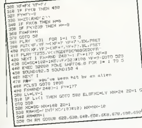
SP space station graphic (base)
BL/LB blanking graphics
EX explosion graphic
TH alien graphics
N0 to N9 numeral graphics for score dispaly

Simple

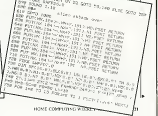
X,Y co-ordinates of space station
X1,Y1 co-ordinates of space station's previous position
XF,YF co-ordinates of alien
FX,FY co-ordinates of alien's previous position
PB number of plasma bolts remaining
LV number of lives remaining



```
10 PMODE 3 PCLS3 CLEAR 200,31999
20 GOSUB1090 GOSUB720 GOSUB 1250
30 FOR I=1 TO 50 PSET(RND(255)-1,RND(176)+8,2):N
EXT I
40 POKE &HFFD7,0:SCREEN1,0
50 X=INT(JOYSTK(0)*3.79)
60 IF X=X1 THEN 90
70 PUT(X1,0)-(X1+15,7),LB,PSET
80 PUT(X,0)-(X+15,7),SP,PSET X1=X
90 IF PB<1 THEN GOTO 230
100 BN=PEEK(65280)AND3
110 IF BN<>2 THEN GOTO 230
120 PB=PB-1
130 PUT(234,184)-(241,191),BL,PSET XC=PB NX=250:
Z0=2 GOTO 530
140 COLOR 2,3
150 NK=160
160 IF X+7<XF THEN 190
170 IF X+7> XF+7 THEN 190
180 NK=YF+4
190 LINE(X+7,8)-(X+7,NK),PSET
200 LINE(X+7,NK)-(X+7,8),PRESET
210 SOUND 100,1
220 IF NK<>160 THEN 380
230 PUT(XF,YF)-(XF+7,YF+7),BL,PSET
240 IF YF>7 THEN 280
250 IF XF> X+15 THEN 280
260 IF XF < X THEN 280
270 GOTO 440
280 GET(FX,FY)-(FX+7,FY+7),BL,G
290 PUT(FX,FY)-(FX+7,FY+7),TH,PSET
```



```
300 XF=FX YF=FY
310 IF FY<8 THEN 490
320 FY=FY-8
330 H=ZT(RND(2))
340 IF FX<8 THEN H=8
350 IF FX>239 THEN H=-8
360 FX=FX+H
370 GOTO 50
380 PLAY"V31" FOR I=1 TO 5
390 PUT(XF,YF)-(XF+7,YF+7),EX,PSET
400 PUT(XF,YF)-(XF+7,YF+7),BL,PSET
410 PLAY"T255,V31MGDEFDC988GEDDFA"
420 NEXT I FX=RND(240)-1 FY=177 XF=0
430 SC=SC+100+INT(YF/32)*100 YF=9:GOTO 520
440 EXEC 32000 POKE &HFFD6,0 FOR I= 1 TO 5
450 SOUND182,5 SOUND150 4
460 NEXT I
470 A$="   you've been hit by an alien
480 PCLS3 GOTO 1000
490 FX=RND(240)-1 FY=177
500 LV=LV-1
510 IF LV<1 THEN GOTO 580 ELSEXC=LV NX=24 Z0=1 G
OTO 530
520 XC=SC NX=160 Z0=1
530 RM=XC-(INT(XC/10)*10) NX=NX-10
540 RM=RM+1
550 ON RM GOSUB 620,630,640,650,660,670,680,690,
```



```
700,710
560 XC=INT(XC/10)
570 IF XC<1 THEN ON Z0 GOTO 50,140 ELSE GOTO 280
580 POKE &HFFD6,0
590 SOUND 1,10
600 A$="          alien attack over
610 GOTO 1000
620 PUT(NX,184)-(NX+7,191) N0,PSET RETURN
630 PUT(NX,184)-(NX+7,191) N1 PSET RETURN
640 PUT(NX,184)-(NX+7,191) N2,PSET RETURN
650 PUT(NX,184)-(NX+7,191),N3 PSET RETURN
660 PUT(NX,184)-(NX+7,191) N4 PSET RETURN
670 PUT(NX,184)-(NX+7,191),N5,PSET RETURN
680 PUT(NX,184)-(NX+7,191) N6 PSET RETURN
690 PUT(NX,184)-(NX+7,191),N7,PSET RETURN
700 PUT(NX,184)-(NX+7,191),N8,PSET RETURN
710 PUT(NX,184)-(NX+7 191  N9,PSET RETURN
720 POKE &HFFD7,0
730 DIM SP(16,8),BL(8,8) LB(16,8),EX(8,8) TH 8,8
),N0(8,8),N1(8,8),N2(8,8) N3(8,8) N4(8,8),N5(8,8
),N6 8 8),N7 8,8) N8(8,8),N9(8,8),ZT(2) X1=0
740 ZT(1)=9 ZT(2)=-8 FX=RND(240)-1 FY=177 XF=0 (
F=9 N=0 SC=0 PB=50 LV=10
750 FOR I=0 TO 15 FORJ=0 TO 1 PSET(I,J,4) NEXTJ
I
```

How it works

- **30** sets a background of randomly located stars
- **40** increase speed
- **50-80** check joystick and move base accordingly
- **90** checks for out of plasma bolts
- **100** checks for fire button being pressed
- **140-220** fire plasma bolt and check for hit
- **230-290** check for collision between alien and base
- **300-370** move alien randomly up screen
- **380-420** make a struck alien explode and generate appropriate sound (note the use of a fast tempo, multi-noted 'play' string for an interesting sound effect)
- **430** updates score for a hit and branches to score display routine
- **440-480** collision routine inverts screen via machine code procedure; then sounds klaxon
- **490-510** reset variables for restart. Checks for running out of lives which is dealt with in 580-610
- **520-710** update and displays current scores
- **720-990** sets up all the graphic arrays to be used in 'put/get' operations in the main loop
- **1000-1080** "do you want to play again?" screen — resets variables if answer is yes
- **1090-1230** fill screen with playing instructions. There is a delay loop at 1230 which can be altered if wished
- **1250-1290** sets up machine code routine for screen inversion

Hints on conversion

Not recommended! Definitely a case for writing your own version. If you have a machine that supports user defined graphics and allows text on graphic screens then you could construct a more compact program than this

DRAGON PROGRAM

```
760 FOR I= 2 TO 13:FOR J= 2 TO 3 PSET(I,J,4) NEX
T J,I
770 FOR I=4 TO 11 FOR J= 4 TO 5 PSET(I,J,4) NEXT
J,I
780 FOR I= 6 TO 9 PSET(I,6,4) NEXTI
790 FOR I=7 TO 8 PSET(I,7,4) NEXT I
800 GET(0,0)-(15,7),SP,G PCLS3
810 GET(0,0)-(7,7),BL,G PCLS3 GET(0,0)-(15,7),LB
,G:PCLS3
820 FOR I= 3 TO 4 PSET(I,0,1) NEXTI FOR I=2 TO 5
 PSET(I,1,1) NEXTI FORI=2TO3:FORJ=1TO6 PSET(J,I,
1) NEXTJ,I
830 FOR I= 4 TO 5 FOR J=2 TO 5 PSET(J,I,1) NEXTJ
,I
840 FOR I= 0 TO 1 PSET(I+1,6,1):PSET(I+5,6,1) NE
XTI
850 FOR I=0 TO 7 PSET(I,7,1) NEXT I
860 GET(0,0)-(7,7),TN,G:PCLS3
870 FOR I= 1 TO 34 PSET(RND(8)-1,RND(8)-1,2):NEX
T I
880 GET(0,0)-(7,7),EX,G:PCLS3
890 FOR I=0 TO 6 STEP 2 PSET(I,0,2) PSET(I,7,2)
NEXT I FOR I=0 TO 7 PSET(0,I,2) PSET(7,I,2) NEXT
 I
900 GET (0,0)-(7,7),N0,G:PCLS3
910 FOR I=0 TO 7:PSET(4,I,2):NEXT I GET(0,0)-(7
7),N1,G PCLS3
920 FOR I=0 TO 6 STEP 2 PSET(I,0,2) PSET(I,3,2)
PSET(I,7,2) NEXT I FOR I=I TO 3 PSET(6 I,2) PSET
(0 I+3,2) NEXT I GET(0 0)-(7,7),N2,G PCLS3
930 FOR I=0 TO 6 STEP 2 PSET(I,0,2) PSET(I,3,2)
PSET(I,7,2) NEXT I:FOR I=0 TO 7 PSET(6,I,2) NEXT
 I GET(0,0)-(7,7),N3,G PCLS3
940 FOR I=0 TO 6 STEP 2:PSET(I,3,2) NEXT I FOR I
=0 TO3 PSET(0,I,2) PSET(6,I,2) PSET(6 I+4,2) NEX
T I:GET(0,0)-(7,7),N4,G PCLS3
950 FOR I=0 TO 6 STEP 2 PSET(I,0,2) PSET(I,3,2
PSET(I,7 2) NEXT I FOR I=0 TO 3 PSET(0,I,2) PSET
(6,I+4 2) NEXT I GET(0,0)-(7 7) N5,G
960 FOR I=4 TO 6 PSET(0,I,2) NEXT I GET(0,0)-(7,
7),N6 G PSET(6,1,2) PSET(6,2 2) GET(0,0)-(7 7) N
8,G
970 FOR I=0 TO 4 STEP2 PSET(I,7,3) NEXT I FOR I=
4 TO 6 PSET(0,I,3) NEXT I GET(0,0)-(7,7),N9,G PC
LS3
980 FOR I=0 TO 6 STEP 2 PSET(I,0,2) NEXT I FOR I
=1 TO 7 PSET(6,I,2) NEXT I:GET(0,0)-(7,7),N7,G
990 RETURN
1000 SCREEN0,0 CLS
1010 PRINT@96 A$
1020 PRINT@230, YOUR FINAL SCORE IS -";SC
1030 PRINT@416, do you want to play again?(yORn)

1040 F$=INKEY$ IF F$=   THEN 1040
1050 IF F$<> Y  THEN CLS END
1060 LV=10 P0=50 SC=0 FX=RND(240)-1:FY=177 XF=0
YF=9
1070 PCLS3
1080 POKE &HDDF7,0 GOTO 30
1090 CLS PRINT@10, alien attack"
1100 PRINT@64, SHOOT DOWN THE INVADING ALIENS"
1110 PRINT@96 'AS THEY TRY TO PASS YOU
1120 PRINT@160,"YOU SCORE 100+  FOR EVERY ALIEN
1130 PRINT@192, YOU HIT-BUT WATCH OUT FOR"
1140 PRINT@224, COLLISIONS!YOU CAN MOVE YOUR"
1150 PRINT@256, SPACE STATION HORIZONTALLY USING

1160 PRINT@288, THE RIGHT HAND JOYSTICK,AND FIRE

1170 PRINT@320,'PLASMA BOLTS USING THE FIRE
1180 PRINT@352, BUTTON-BUT BEWARE-YOU ONLY HAVE"
1190 PRINT@384, 50 BOLTS.THE ALIENS WILL KEEP"
1200 PRINT@416,"COMING AS LONG AS YOU SHOOT THEM

1210 PRINT@448, DOWN-YOU HAVE TEN LIVES'
1220 FOR I=1 TO 3500 NEXTI
1230 RETURN
1250 FOR I= 1 TO 26
1260 READ A:POKE I+31989,A
1270 NEXT I
1280 RETURN
1290 DATA 198,5,142,6,0,166,136,0,57,167,136,0 4
8,136,1,140,30,0,38,241,58,193,0 38,233,57
```

FOR FIRST TIME USERS.

A new series of books which introduce newcomers to the most widely used micros in the marketplace.

The books assume absolutely no knowledge about computers and the reader is shown even the most fundamental operations such as "switching on" and "loading a program". The books lead the reader through simple programming and then onto graphics, with several programs which show how to achieve pictures and even animation. The books contain a number of specially written programs which show the full potential of these machines

"The text is liberally supported by all manner of useful diagrams and illustrations (including many black and white photographs of the screen). The overall presentation is excellent. The printing, setting out and listings are clear and positively invite the reader to have a go."
EDUCATIONAL COMPUTING

£5.95

(incl postage)

ORDER FORM

READ-OUT BOOKS AND SOFTWARE
8 Forge Court, Reading Road
Yateley Camberley Surrey GU17 7RX

24 hour answering service Tel (0252) 873373

Name________

Address________

NOW AVAILABLE
Please send me   copy/ies all at £5.95 each
incl postage & packing (Allow 14 days for delivery)

☐ Learning to Use the PET Computer
☐ Learning to Use the BBC Microcomputer
☐ Learning to Use the ZX Spectrum
☐ Learning to Use the Apple II/IIe
☐ Learning to Use the Commodore 64
☐ Learning to Use the VIC-20 Computer
☐ Learning to Use the ZX81 Computer
☐ Learning to Use the Dragon 32
☐ Learning to Use the TI99/4a
☐ Learning to Use the Oric 1
☐ Learning to Use the Lynx

Make cheques payable to **Newtech Publishing Ltd**

I enclose my cheque for £________
Please debit my Access ☐ ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

Signed________ Date________

READ-OUT   HCW19

Computer flights of fantasy

Know the fear of flying with these aerial adventures for a range of micros.

Winging It TI-99/4A £10

Not Polyoptics, from Stainless Software, 10 Alstone Road, Stockport, Cheshire SK4 5AH

Could this be the first flight simulator for the TI? Once you've mastered basic flying, you can progress to one of three games. In game 1 you locate and fly over a meteorite, game 2 sets you the task of finding and destroying a flying saucer, and in game 3 you are pitted against an enemy plane.

There's no 3D view of the runway or the like, but there is a first-class display of the instrument panel and realistic engine noises. Comprehensive instructions are supplied.

The instructions warn that beginners may have a rough ride and they aren't kidding. Taking off was OK, but once in the air I found an affinity for flying upside down and making unscheduled and rather violent landings.

Still, practice makes perfect. I thought this was an excellent program, which should appeal to budding pilots of all ages. **D.B.**

instructions	100%
playability	90%
graphics	90%
value for money	90%

★★★★★

Nightflight Dragon 32 £7.95

Salamander Software, 27 Ditchling Rise, Brighton, East Sussex BN1 4QL

If this is a flight simulator I am green with yellow stripes (I'm not!) The Dragon can do, and has done, much better stuff than this. The best thing about the game is the opening title page, and even then they played Those Magnificent Men in their Flying Machines wrong!

Low resolution graphics, bad use of colour and unrealistic sound. The sceen did not look at all like a plane cockpit — no dials, all the same presentation.

I would now like to say "on the plus side", but there isn't a plus side. I suppose the instructions were clear(ish) but they weren't relevant to the game.

Psion's flight simulation program for the ZX81 is much better than this, it has higher resolution graphics, is more responsive and more realistic. **P.S.**

instructions	80%
playability	10%
graphics	10%
value for money	3%

★

Landfall BBC B £7.95

Virgin Games, 61/13 Portobello Road, London W11

This is a sort of sophisticated Lunar Lander, though as the landing process is all done by instruments, it could be more aptly described as a spaceship landing simulator.

The overall effect is very convincing, colour is unobtrusive but effective, and the sounds (which you can switch off) are realistic.

Landing safely is no easy feat – you really have to watch all the gauges and keep a balance to avoid being burned up on entry. I never managed to land at all, and would have liked some sort of variable difficulty level or practice option.

The program loads in three blocks and after loading the first I had all the signs of a crash on my hands. After several attempts I just let it continue, and it loaded the second block — a screen picture, then the game. **R.F.**

instructions	80%
playability	67%
graphics	73%
value for money	86%

★★★★

Night Flight TI-99/4A £5.00

Stainless Software, 10 Alstone Road, Stockport, Cheshire

As commander of the Starship Patscram, it is your task to clear a landing strip in a hostile city defended by ground lasers and spacecraft.

This is an addictive game which requires dexterity to manipulate the 10 keys needed to play fully. There are plenty of skill levels and great scope for player improvement.

You score points for forward movement and firing splat bombs but these diminish your fuel. Points are also awarded for destroying the enemy, safe landing and refuelling. High scores can be saved on tape.

This is a lengthy program to load but there is only a minimum delay in setting up. It has at least two bugs:

1 The acceleration command lets your ship exit the right-hand boundary

2 Bomb speed keys are inoperable if ship's control keys are reselected

But these are minor irritations in what is otherwise a very good TI game. **C.F.**

instructions	90%
playability	80%
graphics	90%
value for money	90%

★★★★

Up Up and Away Atari 400/800 £14.95

Starcade, 15 Moorfields, Liverpool, L22 BQ

If you've worn your nerve-endings to a frazzle with pacman, invading creatures and perilous adventures, perhaps you think hot-air ballooning would make a nice quiet change. Take it from me — Up Up and Away will make you want to keep your feet firmly on the ground.

You take off with a limited amount of butane and ballast, and your aim is to fly round a circuit avoiding hazards on the way. These range from nasty little boys with slingshots, updraughts and downdraughts, thunderstorms, the local Flying School for the Shortsighted, and even incontinent pigeons!

The graphics are among the best I've ever seen, and the five levels of difficulty will provide a long-lasting challenge. **J.P.**

instructions	80%
playability	85%
graphics	95%
value for money	85%

★★★★

ANIROG SOFTWARE

KRAZY KONG

[illegible]

KB JS VIC 20 16K £7.00

MINI-KONG

[illegible]

KB JS VIC 20 UNEXP £5.95

XENO II

[illegible]

JS VIC 20 16K £7.00

THE DUNGEONS

[illegible]

KB VIC 20 16K £6.95

FROGRUN

[illegible]

KB JS VIC 20 Unexp £5.95
KB JS SPECTRUM 16K 48K £5.95
KB JS COMMODORE 64 £5.95

DOTMAN

[illegible]

JS KB VIC 20 Unexp £5.95

3D TIME TREK

[illegible]

JS VIC 20 16K £5.95
JS COMMODORE 64 £5.95

ZOK'S KINGDOM

[illegible]

KB JS VIC 20 16K £6.95

GALACTIC ABDUCTORS

[illegible]

JS VIC 20 16K £7.00

SLAP DAB

[illegible]

KB JS VIC 20 UNEXP £5.95
KB JS SPECTRUM 16K 48K £7.95

TINY TOT'S SEVEN

KB SPECTRUM 16K-48K £6.95
KB VIC 20 Unexp £6.95

PHARAOH'S TOMB

KB VIC 20 16K £5.95

CRAWLER

[illegible]

JS VIC 20 Unexp £5.95

CAVERN FIGHTER

[illegible]

KB JS VIC 20 Unexp £5.95

Also available at

computers

COMMODORE BBC SPECTRUM DRAGON 32
ORIC Disc Drives - Printers Memory Add ons
and the best selection of software and books
8 HIGH STREET HORLEY SURREY
29 WEST HILL DARTFORD, KENT

TRADE ENQUIRIES WELCOME,
GENEROUS DISCOUNT
24 HR CREDIT CARD SALES HORLEY (02934) 6083
PAYMENT BY CHEQUE P.O. ACCESS VISA
ANIROG SOFTWARE
8 HIGH STREET
HORLEY SURREY
Overseas 50p post & packaging

We'll help you do better

TEXAS INSTRUMENTS SOFTWARE AT DISCOUNT PRICES

Examples:

Extended Basic	69.95	Adventure/Pirate	26.50
Invaders	18.50	The Count	18.50
Parsec	26.50	Alligator Mix	23.50
Soccer	21.50	Editor Assembler	69.95
Chess	15.50	Speech Editor	18.50

NEW BOOK Kids and the TI-99/4A

All orders over £25receive a £1 gift voucher!!

Monthly Magazine
A must for all TI-99/4A owners supplied individually or by subscription. May issue now in stock (dealer enquires invited)

MAY issue now in stock (dealer enquires invited)
LANTERN cassette games in stock

TEXAS 35 Programe Book £5.95

All prices include VAT and postage. Send SAE for full list. Send cheque with order or phone to use Barclaycard or Access

Remember There are no extra charges at Galaxy

GALAXY
60 High St, Maidstone, Kent
Tel: (0622) 679265 or 682575

Nearly 400 Programmes IN STOCK
Ring for our Price List

CLWYD PERSONAL COMPUTERS

Unit 19 Daniel Owen Precinct Mold CH7 1AP
Telephone Mold 56842

ATARI
400 inc BASIC £149.95p
800 £299.
48K Lynx £225
VIC STARTER PACK £139.99p
ORIC 1 48K £169.95p
Phone Orders Welcome on **0352-56842**

Orders over £200 - Postage & Packaging **FREE**
NEXT DAY DELIVERY AVAILABLE Please ring for details
I enclose cheque/P.O. for £ ____________
or please debit my Access Card No
☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
NAME ____________
ADDRESS ____________
HCW 19

Give your VIC lots more character

Take the tedium out of redesigning characters. Allen Webb's program for the VIC-20 does the work for you

There are few items of software available for the VIC-20 that do not use custom designed characters in some way. Most home computers have the ability to display user defined characters but the VIC seems to have better facilities than most.

In short, the VIC enables you to redesign a full set of 256 characters. In fact, by switching between the ROM sets, a 256 full set and a 128 half set, you have access to a grand total of 640 characters (and that's enough for anybody).

The one big nuisance with user defined characters is the designing/entering stage of the characters. To the uninitiated, this process involves.

A Design the character on some kind of eight by eight grid
B Calculate the data value corresponding to each line of the character
C Enter the data values into the right portion of RAM in the VIC

In all, this job is soul destroying, tedious and unnecessary. The logical approach is to use a program to perform all the work. A number of software houses have accepted this fact, and a number of character designing routines are available, at a price.

I have used a number of commercially available programs and came to the conclusion that none provided an adequate environment for the design of large numbers of new characters.

In this light, I have developed a routine which provides all the necessary facilities. This article describes the routine and give instructions for its use.

First I will give the basic design criteria I specified for the routine.

1 The routine must enable the user to create 256 new characters at one sitting without recourse to unwieldy use of tape storage

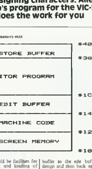
2 All data manipulation should be fast with use of machine code as required

3 The program should allow you to create 'macros' consisting of up to 25 characters

4 The editor should offer as many facilities as possible but remain uncomplicated

5 There should be facilities for the saving and loading of character files on tape and the down-loading of the character block to the correct RAM area

Figure 1 — memory map



In view of these requirements, it soon became clear that a memory expansion of at least 8K was necessary. The operational foibles of the 6560 chip are such that any new characters must reside at specified locations between $1000 and $1E00. As a consequence the bottom of BASIC must be raised to accommodate the characters. **Figure 1** gives details of the new memory map.

The simplest method of handling the characters was to use two storage buffers. An edit buffer located at between $1800 and $1400 is used to hold the block of 64 characters during the editing process.

A larger storage block residing at $3800 is used to store the full 256 characters as four blocks. Blocks of 64 characters are then moved from the storage buffer to the edit buffer for design and then back again for storage.

The first step is to type in the program. Do this as you would any other program but **don't run it yet!** Save the program. Reset the VIC by a SYS 64802

- Type in the one line program 10 POKE 44,28: RUN

- Execute the direct command POKE 642,28: SYS64824

- Load the character editor. Type in POKE44,18 followed by Return

- SAVE the program as normal

You now have a relocated routine as described in **Figure 1**. I suggest that you make at least three verified copies of the routine (accidents can happen!!) You can now run and debug the program.

Now the hard work is over we can now get down to using the program. On running you will see the main menu. You select the options by pressing the corresponding number.

Option 1 enters the edit mode and gives you a screen similar to **Figure 2.**

The display is rather crowded so I'll give a quick run down on the items. The top three lines show the 64 characters in the edit buffer. The character being edited is printed in cyan to distinguish it from the rest. The edit window is the 8×8 grid in which the character is designed. The macro window is used for building up complex forms out of several characters.

The column of numbers between the windows are the data values for use in data statements, if required. The command line is used for input prompts. The bottom two lines summarise the commands available in this mode.

On entering edit mode the first character is selected for editing. This character is drawn in the edit window and the corresponding data values shown. A chequered edit cursor is printed in the top left corner of the window. This cursor is printed in the top left corner of the window. This cursor can be moved with the normal cursor controls (ie up, down, left, right & home). Pressing return will send the cursor to the extreme left of the next line down. CLR will clear the edit window. Pressing * will set the point under the cursor and SPACE will clear the point. The data values and the character in the top three lines will change as you edit the character.

Two commands enable you to change the orientation of the character.
I will invert the character
R will reverse or reflect the character

Once you have finished with the character you can move on to another by one of two commands.
N will move on to the next character.
G will goto any specified character.

You can copy any character by pressing 'C'.

You enter macro mode by pressing M. You will then be asked if you wish to clear the window. You can specify the size of the macro up to a size of 5×5.

A cursor will appear and you will be asked to enter the characters to be used in the macro. The character currently under the cursor will be given as a default value to help prevent unnecessary typing.

Press E to leave edit mode and return to the main menu. I realize that the number of editing commands is large, but after a short time you will get the hang of it.

The second option on the main menu relates to the movement of data. On pressing 2, you will see a second menu. Options 1 and 2 allow you to move character blocks from the store buffer to the edit buffer and vice versa. Option 3 allows you to down-load any of the blocks of characters in the ROM to the edit buffer. Option 4 will fill the edit buffer with blanks. You can abort any of the data movement commands by pressing *.

Option 3 on the main menu will kill the program and restore your full memory. The store buffer is down-loaded to the space $1400 to $1C00. The start of BASIC at $1C00 and leave any characters below it intact.

Options 4 and 5 enable you to save and load the store buffer on tape. This is useful if you plan to spend several sessions designing your character sets.

Option 6 on the main menu will display the contents of the store buffer on screen. Each block of 64 characters will be displayed in a different colour. You should be careful to save the edit buffer in the store buffer before using this option since the edit buffer will be corrupted.

OK, so what do you do when you've designed your character set?

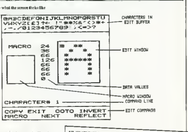
You must ensure before proceeding that all of the characters are in the store buffer. If you kill the program with option 3 of the main menu, this restores your full memory and puts the store buffer in the area starting at $1400.

The start of BASIC is still at $1C00. You can now load or type in your own program. To use the new set of characters redirect the internal pointer with POKE 36869, 205. To save your program with the character set

Input the command POKE44,18 followed by Return

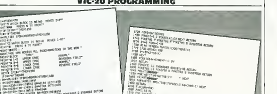
Save and verify the program as normal

Figure 2 — what the screen looks like



```
10 REM CHAR EDIT A E WEBB 1983
20 PRINT"♥" CU$="[illegible]"
30 DF=37792 FORI=4864TO4880 READX POKEI,X NEXT
40 POKE55,0 POKE56,120 POKE51,0 POKE52,20 POKE4865,0 SYS4864
50 TM=PEEK(56) POKE20,56 POKE630,130
60 DEFFNA(X)=4230+(Y-1)*22+X
70 DEFFNB(X)=4096+(V-1)*22+X
80 PRINT"♥   CHARACTER EDITOR" POKE36869,192
90 PRINT"■ ■1■ EDIT CHARACTERS"
100 PRINT"■ ■2■ MOVE DATA"
110 PRINT"■ ■3■ KILL THE PROGRAM WITH     CHARACTERS IN        POSITION"
120 PRINT"■ ■4■ SAVE CHARACTERS           FROM STORE BLOCK"
130 PRINT"■ ■5■ LOAD CHARACTERS           FROM TAPE TO STORE   BLOCK"
140 PRINT"■ ■6■ DISPLAY STORE             BLOCK"
150 PRINT"■    SELECT OPTION"
160 GETI$ IFI$=""THEN160
170 I=VAL(I$) IFI<=0ORI>6THEN160
180 ONIGOTO190,1130,1830,1770,1990,1820
190 PRINT"♥" POKE36869,0 CH=0
200 FORI=1TO191
210 POKE3960+I,I POKE37760+I,0
220 NEXT
230 PRINT"■■──────────────────────"
240 PRINTTAB(11)"┌────────┐"
250 FORI=1TO8
260 PRINTTAB(11)"│        │"
270 NEXT
280 PRINTTAB(11)"└────────┘"
290 PRINT"■■■ MACRO" PRINT"■┌────┐"
300 FORI=1TO8 PRINT"│    │" NEXT
310 PRINT"└────┘"
320 LI=18 GOSUB1890 PRINT"■──────────────────────"
330 PRINT"■COPY ■EXIT ■GOTO ■INVERT■ ■MACRO ■NEXT ■REFLECT■"
340 FORI=0TO7
350 CV=PEEK(6144+CH*8+I)
360 V=I+6 FORJ=7TO0STEP-1
370 K=19-J
380 C$=" " IF(CV AND 2↑J)>0 THENC$="■"
390 GOSUB1740 PRINTC$
400 NEXT NEXT GOSUB1840
410 LI=18 GOSUB1890 PRINT"EDITING CHARACTER#"CH POKE37888+CH,2
420 X=1 Y=1
430 LC=PEEK(FNA(X)) POKEFNA(X),102
440 GETA$ IFA$=""THEN440
450 A=ASC(A$)
```

```
460 IFA=17ANDY<8THENNY=Y+1 NX=X GOTO670
470 IFA=145ANDY>1THENNY=Y-1 NX=X GOTO670
480 IFA=29ANDX<8THENNX=X+1 NY=Y GOTO670
490 IFA=157ANDX>1THENNX=X-1 NY=Y GOTO670
500 IF(A=17ORA=145ORA=29ORA=157)THEN670
510 IFA=19THENPOKEFNA(X),LC X=1 Y=1 GOTO430
520 IFA=147THEN880
530 IFA=42THEN680
540 IFA=32THEN720
550 IFA=78THEN760
560 IFA=67THEN830
570 IFA=69THEN880
580 IFA=77THEN870
590 IFA=71THEN780
600 IF A=13THEN1010
610 IFA=73THEN1040
620 IFA=82THEN1070
630 POKEFNA(X),LC GOTO430
650 FORY=1TO8 FORX=1TO8
660 POKEFNA(X),32 NEXTX,Y FORR=1TO8 GOSUB1730 NEXT GOSUB1840
665 X=1 Y=1 GOTO430
670 POKEFNA(X),LC X=NX Y=NY GOTO430
680 POKEFNA(X),42 TX=X TY=Y GOSUB1730 X=TX Y=TY
690 PRINTLEFT$(CU$,6+Y);TAB(7)"  ■"PEEK(6144+CH*8+Y-1)
700 IFX=8THEN430
710 X=X+1 GOTO430
720 POKEFNA(X),32 TX=X TY=Y GOSUB1730 X=TX Y=TY
730 PRINTLEFT$(CU$,6+Y);TAB(7)"  ■"PEEK(6144+CH*8+Y-1)
740 IFX=8THEN430
750 X=X+1 GOTO430
760 POKE37888+CH,6 IFCH<63THENCH=CH+1
770 GOTO340
780 LI=18 GOSUB1890 INPUT"GO TO CHARACTER#";C$ C=VAL(C$)
790 IFC>63ORC<0THEN780
800 POKE37888+CH,6 CH=C
810 POKE37888+CH,6 GOTO370
820 LI=18 GOSUB1890 INPUT"COPY CHARACTER#";CC$ CC=VAL(CC$)
830 IFCC>63ORCC<0THEN820
840 FORI=0TO7
850 POKE(6144+CH*8+I),PEEK(6144+CC*8+I)
860 NEXT GOTO340
870 LI=18 GOSUB1820 INPUT"CLEAR MACRO AREA";M$ IF(M$="N")THEN900
880 IFM$<>"Y"THEN870
890 FORY=1TO14 FORX=1TO8 POKEFNB(X),32 NEXT NEXT
900 LI=18 GOSUB1890 INPUT"HEIGHT OF MACRO";HI$ HI=VAL(HI$) IFHI>3ORHI<0THEN870
910 LI=18 GOSUB1890 INPUT"WIDTH OF MACRO";WI$ WI=VAL(WI$) IFWI>3ORWI<0THEN910
920 POKEFNA(X),LC TX=X TY=Y
930 FORV=1TOHI FORW=1TOWI
940 CA=PEEK(FNB(X)) IFCA>127THENCA=CA-128
950 POKEFNB(X),102 POKEFNB(X)+OF,6
960 LI=18 GOSUB1890 PRINT"CHARACTER#";CA
970 INPUT"■■■■■■■■";C1$ C1=VAL(C1$)
980 IFC1>63ORC1<0THEN960
990 POKEFNB(X),C1+128 NEXT NEXT X=TX Y=TY
1000 LI=18 GOSUB1890 PRINT"EDITING CHARACTER#";CH POKE37888+CH,2 GOTO430
1010 POKEFNA(X),LC
1020 IFV<8THENV=V+1
1030 X=1 GOTO430
1040 FORI=0TO7 M(I)=PEEK(6144+CH*8+I) NEXT
1050 FORI=0TO7 POKE(6144+CH*8+I),M(7-I) NEXT
1060 GOTO340
1070 FORJ=0TO7 NO=PEEK(6144+CH*8+J) FORI=0TO7
1080 M(I)=-((NO AND 2↑I)>0) NEXTI
1090 NO=0 FORI=0TO7
1100 NO=NO+M(7-I)*2↑I NEXTI
1110 POKE(6144+CH*8+J),NO NEXTJ
1120 GOTO340
1130 POKE36869,192
1140 PRINT"♥CHOOSE DIRECTION OF   DATA TRANSFER"
1150 PRINT"■1■ STORE TO EDIT BLOCK"
1160 PRINT"■2■ EDIT BLOCK TO STORE"
1170 PRINT"■3■ ROM TO EDIT BLOCK"
1180 PRINT"■4■ CLEAR EDIT BLOCK"
1190 GETI$ IFI$=""THEN1190
1200 I=VAL(I$) IFI<=0ORI>4THEN1190
1210 IFI=3THEN1280
```



TEST YOUR SKILL, PIT YOUR WITS OR JUST TRY OUT YOUR SPIRIT OF ADVENTURE!
HAVE YOU GOT LIGHTNING REACTIONS? HOW ARE YOUR POWERS OF DEDUCTION?
WHAT IS YOUR IQ?

We have the hottest computer games on earth for you to take yourself to the limits and find out the answers to these questions . . . and more!

TRY OUR GRAPHIC ADVENTURE GAME
STARSHIP ESCAPE FOR THE VIC20 WITH 16K EXPANSION

A Compelling and Exciting Real Time Graphic Adventure in Machine Code. You are the lonely pilot of a Federation stellar scout ship on routine patrol. While travelling through a little known sector of the galaxy you are confronted by a gigantic alien craft; before you can take evasive action a powerful tractor beam draws your craft into the alien ship; your craft is disassembled and each part is put in a different room of the ship, and your quest begins. You must move from room to room in search of each part, overcome the dangers there and bring the parts back to the airlock where you must reassemble your craft and make good your escape. Programmed in Fast Machine Code. Hi Res Colour Graphics. Superb sound effects. Joystick or keyboard control. 4 sheets of play. **Price £5.95**

POPULAR ARCADE STYLE GAMES FOR THE UNEXPANDED VIC20

SKRAMBLE — Your task is to pilot your aircraft into the enemy's underground base and destroy their bombs; firing and guided missiles with your bombs and laser cannon. If you survive the first stage a storm of [illegible] appears in your flight path and the only sound you can hear is [illegible]. Superhuman [illegible] been known to continue bombing and shooting the enemy while out-manoeuvring the fireballs. Programmed in Fast Machine Code. Hi Res Colour Graphics. Superb sound effects. Joystick or keyboard control. Progressive difficulty of play. **Price £7.95**

JUMPIN JACK — Cross a busy road and treacherous river and guide Jack the frog home to his rivers [illegible]. Why you may ask does he have to get across the road and river when he could stay where he is in safety? All is explained when we tell you that his wife is waiting for him on the other side! This program is probably the best Frog sub-arcade game there is for the unexpanded VIC20. Multicolour Hi Res Colour Graphics and novel musical sound effects are said to sound one of our most popular games. Complete with cars, trucks, logs and turtles. Operates from the keyboard or joystick. Progressive difficulty of play. Bonus levels. **Price £7.95**

TRIAD — Defend your base against the suicidal fleet of alien hovershops. The game is the space battle [illegible] and you will have separate control of your [illegible] cannon to defend your base against constant battle attacks. The best version of this exciting arcade game on the VIC20. Double bonus flags and 5,000 points bonus flags. Programmed in Fast Machine Code. Hi Res Colour Graphics. Great sound effects. Joystick or keyboard control. **Price £7.95**

GRIDTRAP — Your aim has good places on a grid of road which open after he walks over them. His object is to reach and deliver a time bomb in less than 60 seconds. Further hazards are presented by a sheet of mines scattered around the grid which cannot be walked on and a wandering BOOT which must be avoided. The more you play the more the harder it gets as more BOOTS appear. Bonus flags are set around the grid which he walks over them and a shoot up to 100,000 games. Programmed in Machine Code. Hi-Res Colour Graphics and great musical sound effects. Joystick or keyboard control. Progressive difficulty of play. **Price £7.95**

ASTRO FIGHTERS — A Space duel for two players at once. Probably the only VIC20 game of its type where one player uses the keyboard and the other a joystick. Each player must duel against his opponent and destroy his Astro Fighter. Each battle takes place in a different sector of space and the computer also plays against the two players by placing the ships amongst dangerous sectors of space. Programmed in Machine Code. Hi Res Colour Graphics and exciting sound effects. Great sets [illegible]. Joystick essential. **Price £6.95**

SCORPION — The scene is the desert and you must defend yourself from a trail of scorpions which wind their way down to your position through acres of poisonous cacti which give off deadly spores. As each scorpion is killed the trail breaks up and they attack individually as they reach you. The cacti must also be destroyed as they are giving cover to the scorpions. A deadly spider also makes its way across your path and must be out manoeuvred or destroyed. A very fast moving and exciting game programmed in Machine Code. Hi Res Colour Graphics and sound effects. Joystick or keyboard control. **Price £7.95**

SPACE RESCUE — The crew of a stranded survey ship have to be rescued from the surface of a remote planet by a shuttle craft from another ship. The shuttle has to be guided through a storm of meteors and landed on one of three landing pads which the crew may board. The return trip to the mothership has to be completed while avoiding the meteors again. Your craft has a limited amount of shot power and some of the meteors can be destroyed as you pilot through the storm. You will have proved yourself a skilful pilot if you survive the trip and bring the whole crew back to the mothership. A very good version of the popular arcade game written in Machine Code and using Hi Res Colour Graphics and sound effects. Progressive difficulty of play. Operates with a joystick or the keyboard. **Price £6.95**

CHOPPER — The scene is a battleground and you are the pilot of an attacking helicopter. Your task is to destroy tanks, trucks and gun emplacements and avoid their barrage of anti aircraft fire and guided missiles. Your task is made harder by the steep sheer valley of the battlefield. Programmed in Machine Code. Hi Res Colour Graphics and sound. Progressive difficulty of play and Joystick or keyboard control. **Price £6.95**

Also: shoot the same range

PUZZLE PACK — A compendium of six intriguing puzzles, games and IQ tests for the unexpanded VIC20. Specially written by an expert in puzzles to be both absorbing and educational for all ages and abilities. Program include ORBITS, KNIGHTS MOVE, GRAPHIC TWISTER, RAINBOWS, SLIDE PUZZLES, DIGITS

DESTROYER — Command *HMS Victory* in an air and submarine shoot. Machine Code. Hi Res Graphics. Joystick NOT required. **Price £7.95**

GUNFIGHT — The classic western shoot-out. Two players together or one player against the computer. Machine Code. Hi Res Graphics with sound. Joystick or keyboard. **Price £5.95**

MULTITRON — Lightning responses are demanded when manning the laser cannon of your galactic starfighter as it comes into combat with a variety of creatures who guard the space warps in their star system. Your goal is to penetrate their defences and destroy each adversary before they destroy your craft. If you survive each attack wave and the deadly Tri-mail as you will have to navigate along a shearing space corridor. One false move and your ship will be disintegrated by the anti matter field. An exciting and stunning game written in Machine Code. Hi Res Colour Graphics with sound effects and Joystick control. **Price £7.95**

AVAILABLE SOON FOR THE COMMODORE 64!

JUMPIN' JACK — Our very popular Frog game now on the 64 with marvellous features: Snakes — Crocodiles — Lady Frog — Two player games — Multiple levels of play — Switch or analogue joystick operation — Keyboard operation — Sprite Graphics — Hi Res Multicolour Mode Graphics — Synthesiser Sound **Price £9.95**

ALSO COMING SOON — INVADERS 64

SUMLOCK Manchester Dept. HCW19
198 Deansgate, Manchester M3 3NE. Tel: 061-834-4233

MAIL ORDER — ACCESS — VISA — AMEX
Post, Packing and Insurance ADD 50p

A VIDCOM CREATION

MIJID, BECAUSE YOUR PRODUCTS HAVE GROWN UP...

Video games a 75% growth in 1982 A spectacular increase giving food for thought! Home micro-computers and video games are nearing full maturity Having reached this stage of development, they can only strengthen their impact with the help of a vigorous commercial strategy And thus Vidcom saw the need and created Mijid

COINCIDING WITH VIDCOM, MIJID IS EXCLUSIVELY RESERVED FOR MICRO-COMPUTERS AND VIDEO GAMES
if you are a publisher programmer or analyst, manufacturer or distributor the success of your products will be enhanced by attending Mijid.

FIVE DAYS IN WHICH TO MEET PROFESSIONALS FROM AROUND THE WORLD
retailers and distributors creating and developing their sales networks producers, from all domains of the software industry looking for new programming ideas writers and programmers negotiating rights for promotion adaptation and distribution international journalists there to report on your new products

MIJID IS A VIDCOM CREATION
and there is a strong tie between these two shows It's normal their interests are complementary Furthermore the professional attending Mijid will be able to count themselves among the regular, prestigious Vidcom attendance A solid guarantee for contacts and contracts
Get ready for the next surge of growth attend Mijid.

MIJID

MIJID AND VIDCOM A COMMON PASSPORT TO NEW COMMUNICATIONS
The first International Video Games, Personal and Home Computer Market
Palais Croisette Cannes (France), 3-7 October, 1983

Trade only

Veuillez m'adresser sans engagement votre documentation "Exposant" Please send me without any obligation, information for "Exhibitors"

Nom/Name
Fonction/Position
Société/Company
Activités de la Société/Main activity of the Company
Adresse/Address
Tel.

Adresser ce coupon à / Please return this coupon to

Commissariat Général 179 Avenue Victor-Hugo 75116 Paris (France) – Tel (33) (1) 505.14.03 Telex 630.547 MIDORG
US representative Harvey Seslowsky – Perard Associates (Syosset Office) 100 Lafayette Drive Syosset, NY 11791 Tel (516) 364.3686 Telex 685211
UK representative Jack Kessler – International Exhibition Organisation Ltd 9 Stafford Street London W1X 3PE – Tel (01) 499.2317 Telex [illegible]

Messing about on your micro

Want to tamper with the inner workings of your micro? Perhaps one of these programs might be of service.

Monitor Jupiter Ace £5.95

Jupiter Cantab, Cheshunt Building, Bateman Street, Cambridge CB2 1LZ

A fairly standard utility program featuring the usual machine code facilities, with the useful options of reading the stack and using FORTH words interactively from within the monitor.

A bufferfull of bytes can be poked directly into nominated addresses, but there is no provision for reading the amount of memory left and the monitor will cheerfully list the contents of non-existent memory addresses — try FFFF!

Hex, octal and decimal bases are available but the main display uses only half the screen and there is no automatic carriage return between successive inputs.

This produces a rather untidy display and provides less information than the Remsoft toolkit with which this monitor will inevitably be compared.

G.M.

instructions	80%
ease of use	70%
display	n/a
value for money	65%

★ ★ ★

Ace-Atari Cassette Enhancer Atari 400/800 £7.95

English Software, 50 Newton St, Piccadilly, Manchester

This piece of autoboot machine code is loaded before you start a BASIC programming session on your machine. It has three distinct parts, each encompassing the previous parts.

Firstly, the enhancer allows CSAVE programs to be named, and gives a VERIFY. Second, there is the utility package, giving RENUMBER, variable DUMP and AUTO line numbering.

Lastly, there is a machine coder, for those wanting to include machine-code routines in their BASIC. Binary files may be saved and loaded, as well as verified.

All three parts contain useful options, although the machine-coder is perhaps the least useful of the three. Ace loads into 4K if all three parts are selected, and will remain in place until you switch off.

M.F.

instructions	90%
ease of use	80%
display	n/a
value for money	80%

★ ★ ★ ★

SYS 64 Spectrum £6.95

Artic, 396 James Reckitt Ave, Hull, N Humberside

For anyone familiar with 64-column displays, the 32-column Spectrum format seems rather cramped. Here is a program to solve that. Load it and half width characters are printed on a 64-column basis. Even listings appear at 64 characters per line.

There was one slight snag with loading the tape — to be precise, two. First it was found that the 16K and 48K versions were on each other's sides of the tape, and then it was found that LOAD "" was more successful than the recommended LOAD "" CODE, as it brought the initialising routine into action.

The actual conversion program lies at the top of store, taking up nearly 2K of RAM (F7A9-FF58 in 48K). It changes the interrupt mode, so that it can poke its nose into the action and perform the necessary conversions.

These appear to be the replacement of normal character shapes by half width versions that are combined in pairs as single characters to be output.

The process is not without its difficulties. Picking up the interrupt for a fresh screen calls for the addition of PAUSE 1 after each clear screen command. Command lines at the bottom of the screen appear in small characters at normal spacing.

In general, the system works, though the narrow characters are not always as clear as might be wished. It also works on the printer, providing a PRINT action is called before each LPRINT. The character size can be switched from normal size to half size within a given display, and for new BASIC programs it gives useful added flexibility.

D.T.

presentation	70%
instructions	80%
ease of use	n/a
display	70%
value for money	

★ ★ ★ ★

The Visual Processor £5.95

Gilsoft, 30 Hawthorn Road, Barry, S Glamorgan CF6 8LE

The idea behind the program is good but the implementation is weak. The action of an imaginary processor is simulated by a BASIC program, with provision for assembly, disassembly, store modification, and even save and load. Since the maximum length of the simulated program is 32 locations, the latter provision seems unnecessary.

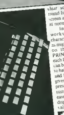
Only sixteen instructions are available, the mnemonics being LDA, STA, INA, OUT, ADD, NEG, LSL, LSR, SBC, ADC, ROL, CMP, JMP, JNZ, JNC and HLT. This offers very limited scope for program construction. As a means of teaching a beginner how to handle machine code, it is like using a kiddie-car to train for world championship motor racing.

To make matters worse there were inconsistencies in the coding. The user, told to use 'end' to return to the main menu eventually finds that the required input is 'END'.

D.T.

instructions	60%
usability	50%
graphics	60%
value for money	15%

★



We'll teach you how to draw

Take Peter Shaw's advice and creating drawings will be a lot easier with your Oric. You'll find his sample program has a strangely familiar result

Although the result of this program has only a novelty value, the way in which it its final aim has other uses.

I'm sure most Oric owners have played around with the graphics commands — oval circles, frantically waving lines, the lot!

Armed with a Print 'n' Plotter jotter — they're not totally exclusive to the Spectrum — I first draw my initial design. One good thing about the Print 'n' Plotter jotters is that they are transparent, so you don't have to be an amazing artist. You can trace the design.

Hints on conversion

For computers such as the Spectrum just change CURSET to PLOT, and change every DRAW statement to DRAW D1,-D2. Owners of other computers which only have absolute draw will have to re-write most of it, I'm afraid.

If you have looked at the listing, you will have noticed that each letter is treated as a single unit. This has two advantages: first, debugging is a lot easier, and secondly when a letter is used twice it is a lot easier to just edit the block and get all them looking the same rather than re-writing a new m and getting something which has no resemblance to the first one.

Variables

D1 relative draw position (X value)

D2 relative draw position (Y value)

A loop to read information into D1 and D2

In every unit (with only a few exceptions) there is a REMark, followed by a CURSET command which fixes the position on the screen where you're going to put the letter, and than a loop which reads data in the part immediately following NEXT A.

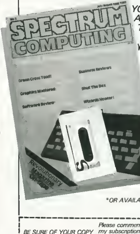
The information read into D1 and D2 is the X-Y relative draw positions of the next line. There are places were you can cheat a little, ie the e is a circle with a couple of points unplotted.

With this information in mind, you can now type in the program, change it as you wish, and design your own personalised logo.

```
10 REM   Home
20 REM  Computing
30 REM    Weekly
40 REM  P,SHAW 1983
50 PAPER 0:INK 4
60 HIRES:INK6
70 CURSET 50,45,1
90 REM H
100 FOR A=1 TO 12
110 READ D1,D2:DRAW D1,D2,1
120 NEXT A
130 DATA 10,0,0,11,6,0,0,-11,10,0
140 DATA0,31,-10,0,0,-12,-5,0,0,12
150 DATA -10,0,0,-31
160 CURSET 86,67,0
170 REM e
180 CIRCLE 10,1:CIRCLE 4,1
190 REM M
200 CURSET 96,57,0
210 FOR A=1 TO 28
220 READ D1,D2:DRAW D1,D2,1
230 NEXT A
240 DATA 10,0,0,3,1,0,3,-3,4,0,1,1
250 DATA 1,0,3,3,3,-3,1,0,1,-1
260 DATA 3,0,4,4,0,15,-7,0,0,-13
270 DATA -1,-1,-2,0,-1,1,0,13
280 DATA -9,0,0,-13,-1,-1,-2,0,-1,1
290 DATA 0,13,-10,0,0,-19
300 REM e
310 CURSET 143,67,0
320 CIRCLE 10,1:CURSET 151,69,0:CURSET15
1,70,0
330 CURSET 151,68,0
340 FOR A=1 TO 8
350 READ D1,D2:DRAW D1,D2,1
360 NEXT A
370 DATA -12,0,0,1,2,2,1,0,1,1,5,0
380 DATA 1,-1,1,0
390 CURSET 146,64,1
400 FOR A=1 0 5
410 READ D1,D2:DRAW D1,D2,1
420 NEXT A
430 DATA -7,0,0,-1,2,-2,3,0,2,2
440 REM C
450 CURSET 49,78,1
460 FOR A=1 TO 33
470 READ D1,D2.DRAW D1,D2,1
480 NEXT A
490 DATA -4,-5,-1,0,-1,-1,-1,0,-1,-1
500 DATA -9,0,-1,1,-1,0,-1,1,-1,0
510 DATA -4,5,-3,6,0,10,2,4,3,3,5,3
520 DATA 1,1,9,0,4,-2,2,-2,1,0,1,-1
530 DATA -7,-7,-3,0,-1,1,-8,0,-1,-1
540 DATA-1,-1,0,-6,2,-2,6,0,3,2,7,-7
550 REMo
560 CURSET 60,94,0
580 CIRCLE10,1:CIRCLE 4,1
590 REM m
600 CURSET 70,84,0
610 FOR A=1 TO 28
620 READ D1,D2:DRAW D1,D2,1
630 NEXT A
640 DATA 10,0,0,3,1,0,3,-3,4,0,1,1
650 DATA 1,0,3,3,3,-3,1,0,1,-1
660 DATA 3,0,4,4,0,15,-7,0,0,-13
670 DATA -1,-1,-2,0,-1,1,0,13
680 DATA -9,0,0,-13,-1,-1,-2,0,-1,1
690 DATA 0,13,-10,0,0,-19
```

```
700 REM p
710 CURSET 107,8,1
720 FOR A=1 TO 20
730 READ D1,D2:DRAW D1,D2,1
740 NEXT A
750 DATA 10,0,0,2,1,0,1,-1,2,-1,4,0
760 DATA 1,1,1,0,4,5,1,1,0,6,-1,2
770 DATA -3,3,-1,0,-1,1,-7,0,-2-2
780 DATA 0,8,-10,0,0,-25
790 CURSET 122,94,0.CIRCLE 4,1
800 REM u
810 CURSET 134,84,1
820 FOR A=1 TO 16
830 READ D1,D2:DRAW D1,D2,1
840 NEXT A
850 DATA 8,0,0,13,1,1,2,0,1,-1,0,-13
860 DATA 9,0,0,18,-9,0,0,-2,-1,0
870 DATA -2,2,-4,0,-3,-1,-2,-2,0,-14
880 REM t
890 CURSET 157,84,1
900 FOR A=1 TO 17
910 READ D1,D2:DRAW D1,D2,1
920 NEXT A
930 DATA 10,-10,0,10,4,0,0,4,-4,0
940 DATA 0,6,1,1,1,0,1,-1,1,0,0,5
950 DATA -2,2,-8,0,-3,-5,0,-9,-1,0
60 DATA 0,-4
970 REM l
980 CURSET 173,84,1
990 FOR A=1 TO 4
1000 READ D1,D2:DRAW D1,D2,1
1010 NEXT A
1020 DATA 9,0,0,19,-9,0,0,-19
1030 CURSET 178,98,0:CIRCLE 4,1
1040 REM n
1050 CURSET 184,84,1
1060 FOR A=1 TO 14
1070 READ D1,D2.DRAW D1,D2,1
1080 NEXT A
1090 DATA 9,0,0,2,3,-2,4,0,3,2,1,1
1100 DATA 0,16,-8,0,0,-13,-1,-1,-2,2
1110 DATA 0,12,-9,0,0,-17
1120 REM s
1130 CURSET 214,84,1
1140 FOR A=1 TO 21
1150 READD1,D2:DRAW D1,D2,1
1160 NEXT A
1170 DATA 15,0,0,10,-1,2,-1,1,-8,4
1180 DATA -9,0,-4,-2
1190 DATA 0,-6,6,4,3,0,4,-3,0,-4
1200 DATA -3,3,-7,0,-3,-3,0,-7,1,-1
1210 DATA 0,-1,3,-3,1,0,5,0
1220 CURSET 215,89,1
1230 FOR A=1 TO 6
1240 READ D1,D2:DRAW D1,D2,1
1250 NEXT A
1260 DATA 4,0,0,4,-5,0,-1,-1,0,-1
1270 DATA 2,-2
1280 REM W
1290 CURSET 120,106,1
1300 FOR A=1 TO 14
1310 READD1,D2:DRAW D1,D2,1
1320 NEXT A
1330 DATA 4,0,3,9,3,-9,3,0,3,9,3,-9
1340 DATA 4,0,-5,15,-4,0,-2,-6,-1,0
1350 DATA -1,6,-4,0,-6,-15
1360 REM E
1370 CURSET 144,106,1
1380 FOR A=1 TO 12
1390 READ D1,D2:DRAW D1,D2,1
1400 NEXT A
1410 DATA 10,0,0,3,-7,0,0,3,7,0,0,3
1420 DATA -7,0,0,3,7,0,0,3,-10,0,0,-15
1430 REM E
1440 CURSET 156,106,1
1450 FOR A=1 TO 12
1460 READ D1,D2:DRAW D1,D2,1
1470 NEXT A
1480 DATA 10,0,0,3,-7,0,0,3,7,0,0,3
1490 DATA -7,0,0,3,7,0,0,3,-10,0,0,-15
1500 REM K
1510 CURSET 168,106,1
1520 FOR A=1 TO 20
1530 READ D1,D2:DRAW D1,D2,1
1540 NEXT A
1550 DATA 5,0,0,4,2,0,2,-2,0,-2,5,0
1560 DATA 0,4,-1,2,-2,2,2,2,0,1,1,1
1570 DATA 0,3,-5,0,0,-2,-3,-2,-1,0
1580 DATA 0,4,-5,0,0,-15
1590 REM L
1600 CURSET 183,106,1
1610 FOR A=1 TO 6
1620 READ D1,D2:DRAW D1,D2,1
1630 NEXT A
1640 DATA 4,0,0,11,5,0,0,4,-9,0,0,-15
1650 REM Y
1660 CURSET 190,106,1
1670 FOR A=1 TO 9
1680 READ D1,D2:DRAW D1,D2,1
1690 NEXT A
1700 DATA 4,0,3,3,,-3,4,0,-4,8,0,7
1710 DATA -5,0,0,-7,-5,-8
1715 GOTO 1800
1720 MUSIC1,RND(1)*3+2,INT(RND(1)*10)+1,
0:PLAY1,0,1,RND(1)*399
1723 FORA=1TO7
1730 INK A
1740 WAIT 10
1750 NEXT A
1760 GOTO 1720
1800 LET X$="   Best for software - ever
y week   "
1810 FR A=1 TO 37
1820 CURSET 6+(6*A),150,0
1830 CHAR (ASC(MID$(X$,A,1))),0,1
1840 NEXT A
1845 PRINT:PRINT:PRINT
1850 GOTO 1720
```

THE MOST EXCITING AND INNOVATIVE SOFTWARE EVER LAUNCHED FOR YOUR SPECTRUM



YOU HAVE **NEVER** SEEN ANYTHING LIKE IT—BECAUSE THERE **IS** NOTHING LIKE IT

YES, IT'S A MAGAZINE, BUT WITH **NO** PAPER. IT IS ENTIRELY 'WRITTEN' ON MAGNETIC TAPE—READY FOR YOU TO SIMPLY LOAD AND RUN.

UNBEATABLE VALUE AT ONLY £2.99

ISSUE NO. 2 NOW AVAILABLE AT SELECTED BRANCHES OF W.H. SMITH AND JOHN MENZIES.

*OR AVAILABLE BY POST FOR £2.99 (POSTAGE FREE)

BE SURE OF YOUR COPY
SUBSCRIBE NOW!

Cut out and SEND TO
SPECTRUM COMPUTING
513 London Road
Thornton Heath
Surrey, CR4 6AR

Please commence my subscription from
issue No. 1 (May/June) ☐
issue No. 2 (July/Aug) ☐

Subscription Rates
£17.94 for 6 issues UK ☐
£20.00 for 6 issues by overseas surface mail ☐
£24.00 for 6 issues by overseas mail ☐
(tick ☐ as appropriate)

I am enclosing my (delete as necessary) cheque/Postal Order/International Money Order for £
(made payable to ASP Ltd) OR
Debit my Access Barclaycard (delete as necessary)
☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

Please use BLOCK CAPITALS and include post codes
NAME (Mr/Mrs)
ADDRESS

POSTCODE
Signature
Date

Fighting fit with your Spectrum

Look out . . . the aliens are on the warpath in these new Spectrum games

Psst £5.50

Inmate, The Green, Ashby de la Zouch, Leics LE6 5JU

Psst is a manoeuvering and shooting game set in the back garden — well, Robbie the Robot's back garden!

An exotic flower is growing, guarded by Robbie, but a number of nasty bugs are set on eating Robbie's flower. Each type of bug requires a different type of spray to destroy it.

The flower will bloom if bugs can be kept away from it. When it does, you move on to the next level where there are more and different forms of nasties.

Compost bags, fly swatters and watering cans will increase your score if you pick them up.

Graphics are smooth moving and colourful and the sound effects are tuneful rather than noisy. You can use keyboard or Kempston joysticks.

Definitely an addictive game.

P F

instructions	90%
playability	90%
graphics	90%
value for money	90%

★ ★ ★ ★ ★

Robon £5.95

Softek, 329 Croxted Road London SE24

The blurb with this program tells me that it's closely modelled on Berserk, so at least you know what you're getting.

For the uninitiated, the game is based on a series of mazes, made up with electrified fences. Touch one and... ZAP! You are pursued by a number of Robons, who not only must avoid the fence, but also your Laz Gun.

If they catch you their touch is deadly. Dodging and weaving is a highly recommended way of increasing your chances, but beware! The Rabok is waiting to appear if you hang around too long and then... KAPOW! Another life bites the dust. Further mazes follow for the skillful.

Rather superior graphics mark this game out, as does the quality of the sound.

One other feature of note is the facility to change the speed. You may not think it all that important, yet it adds substantially to the value of the game.

D M

instructions	95%
playability	95%
graphics	95%
value for money	95%

★ ★ ★ ★ ★

3D-Combat Zone 48K £5.95

Artic, 396 James Reckitt Ave Hull N Humberside HU8 0JA

Don't consider Lacentra for your holidays this year! The place has been devastated by a hundred years of war and is now a radioactive wasteland. This hasn't stopped Artic from basing this 3D tank battle game there all the same.

You must fight a lone battle against tanks and flying saucers (won't it be boring if outer space really turns out to be a friendly and hospitable place?) Your only weapon is a shell blaster and once fired this takes time to reload. As the struggle progresses [illegible] against you.

The 3D effect is interestingly used to make objects loom large as you draw near or shrink as you beat a retreat. Long range shooting usually results in your target tantalisingly moving out of the way at the last moment. Likewise you must avoid the fire of the enemy.

I played the game using the keyboard and found no problems with what is a fairly easy paced game but Sinclair or Kempston joysticks can be used.

D.J

instructions	75%
playability	65%
graphics	70%
value for money	70%

★ ★ ★

Megapede £5.95

Softek, 329 Croxted Road London SE24

Based on the caterpillar idea, the Megapede weaves its way towards you through the mushrooms.

At various points the tension is heightened by the appearance of the deadly Sid the spider and Scorpi the scorpion who drops deadly fleas.

The game itself is an all colour, all action affair with sound. The graphics are well done but not animated in the true sense of the word — they tend to scroll around the screen instead.

The scrolling is, however, so smooth that you have to look hard to realise what's happening. The sound too could be improved but I suspect that both of these factors are related to cramming the code into the smaller of the two Spectrums. There is a limit to what can be done in 9½K.

D M.

instructions	90%
playability	90%
graphics	60%
value for money	80%

★ ★ ★ ★

Cosmic Debris 48K £4.95

Artic, 396 James Reckitt Ave Hull, N Humberside HU8 0JA

Goodness knows how but you have managed once again, despite being an ace star ship commander, to wander into an asteroid belt. To survive there you must blast the asteroids to powder while at the same time fighting off a posse of alien space ships.

Artic describe the two speeds as fast and suicidal, which is a fair description. Very agile fingers are needed to accumulate a good score. Other features are a choice of one or two player games and a high score record.

Debris is a very fast moving game and was quite a challenge to play, at first anyway.

D.J

instructions	75%
playability	65%
graphics	70%
value for money	65%

★ ★ ★

AT LAST!!

SINCLAIR SPECTRUM JOYSTICK CONTROLLER

£14.95!!

SPECTRUM SOUND

AMPLIFIER WITH SPEAKER MAINS POWERED WITH SAVE/LOAD SWITCHING

ONLY £8.95

I²L

INTERACTIVE INSTRUMENTS LTD
INTERACTIVE HOUSE
GREAT CENTRAL ST
LEICESTER
LEIC. 532167

SPECTRUM MEMORY UPGRADES

AN EXTRA 32K FOR ONLY

£24.95 FOR TYPE 2 MACHINES

DISK DRIVES

THE LATEST SHUGART SA200 40 TRACK DRIVES COMPLETE WITH POWER SUPPLY AND STEEL CASE FOR ONLY

£199

FOR BBC

ALL PRICES INCLUDE VAT & P. & P.

LARGE RANGE OF COMPONENTS, HARDWARE AND SOFTWARE

MICROSPHERE

MICROSPHERE COMPUTER SERVICES LTD
72 ROSEBERY ROAD LONDON N10 2LA
TELEPHONE 01-883 9411

EVOLUTION (48K Spectrum)

[illegible] course of evolution from the primordial soup to man, keeping a [illegible] world and surviving the odd disaster as you go? Should be easy — after all it's been done before

Only £6.95

OMNICALC (48K Spectrum)

The best Spectrum spreadsheet you can buy. Written in machine code to be fast [illegible] and to allow more features to be included [illegible]

"If more programs shared the quality of OMNICALC then we might see more Spectrums in offices." Home Computing Weekly 3.5.83

"It is ideal for someone who has not found the spreadsheet concept but it is also a very powerful tool for anyone who has used one previously" Sinclair User June 1983

Complete with comprehensive manual £9.95

ZX SIDEPRINT (Spectrum & ZX81 versions)

Use ZX Sideprint to print sideways, giving you 80-132 etc characters per line (State version required) £4.95

CREVASSE & HOTFOOT (any Spectrum)

Can you make it across the ice as whole chasms open and close all around? [illegible] but remember the plumper the [illegible] the greater the fall!

2 original games for only £4.95

NEW! **THE TRAIN GAME** (any Spectrum) **NEW!**

First there were model railways, then there were computers. Now Microsphere gives you both in one. Featuring passenger, goods & express trains, tunnels, viaducts, points, stations, turntable, bonus games, derailments, irate passengers and everything else you expect from a model railway. [illegible] on each cassette. Superb value for money.

Only £5.95

Let's face it — the sound from your Dragon 32 wouldn't win any prizes at an Eisteddfod. What you need is a:-

Dragon 32

SOUND EXTENSION MODULE

- Fully-cased module plugs into cartridge port
- Provides 3 channels of sound, 3-note chords and harmonies over 5 octaves
- Uses new BASIC command. No need to 'Peek' or 'Poke'
- Many built-in sound effects (e.g. bomb, laser)
- Music and graphics can occur together without loss of speed
- Based on popular, well-proven sound generator
- Two Input/Output ports included
- User manual provided, with examples

Cheque/P.O. to:-
J.C.B. (MICROSYSTEMS)
29, SOUTHBOURNE ROAD
BOURNEMOUTH BH6 5AF
Tel: (0202) 423973

ONLY £34.95 inclusive

Speech Synthesis available shortly

Write or phone for further details

Playing around with your VIC

Here's a selection of new VIC releases, rated for you by our review panel

Catcha Snatcha £5.50

Imagine, Masons Buildings, Exchange St East, Liverpool

A disappointing game which could have been interesting, if a bit more time had been spent ironing out the bugs

As a store detective you must patrol the corridors of your store preventing shoplifters from perpetrating their wicked deeds. Your duties also include returning lost property to the lost property office and disposing of the occasional parcel bomb.

Graphics and animation are good, but a bug causes the player to occasionally leave a trail of debris behind him. This stops the game and requires reloading to continue.

Another fault is that at six o'clock on the store clock the rush hour starts. Then the shoplifters speed up so much that you can only stand and watch as your score falls and falls until the game is over. When a new game begins you are back in the middle of the rush hour again

M B

instructions	70%
playability	30%
graphics	85%
value for money	40%

★ ★ ★

Innavative Cassettes 1-3 £5.95 each

Melbourne House, Glebe Cottage, Station Road, Cheddington, Leighton Buzzard, Beds LU7 7NA

Several games on one cassette sounds like good value for money until you take into account other factors — like quality

These three games compilations are sadly lacking in this respect. Written in BASIC, they are very slow and lacking in detail. Small children — no older than eight — might enjoy the strange sounds and bright colours, but for anyone older, they're a definite no-no.

All the games on the Innovative Cassettes are available in book form, where they are arranged to teach BASIC programming techniques to beginners to computing while entertaining at the same time. Fair enough.

With this in mind, the book is much better value for money than the cassettes.

M B

instructions	60%
playability	20%
graphics	20%
value for money	10%

★

Casmic Fire Birds 8K or 16K £9.95

Solar Software, 51 Meadowcroft, Radcliffe, Manchester M26 8JP

I suspect that Solar must be suffering from a plague of bad tapes since I had no end of trouble getting this program up and running. Solar were most helpful and supplied a second tape in record time. This tape was no better. As a consequence this review is based on only one test session.

This game is a sort of invader cum galaxian cum phoenix game in which you try to repulse hordes of different alien species. There are four different types of nasties with differing modes of violence and different point values. You have five initial lives with which to slice up as many of the opposition as possible.

The use of colour and graphics were up to a good standard and the aerobatics of the aliens were quite amazing. The game is of progressive difficulty with each level imposing greater amounts of anguish.

A good but slightly over priced game

A.W

instructions	85%
playability	85%
graphics	85%
value for money	65%

★ ★ ★ ★

Cyclons 8K or 16K £9.95

Rabbit Software, 380 Station Road, Harrow, Middlesex

Yippee! An invader game with a new scenario. Excuse the outburst but new ideas are a rarity nowadays

Consider an asteroids type arrangement in which you and the aliens float about the screen. You attempt to shoot the aliens by firing in any of the eight standard directions. The opposition will either shoot back or try to ram you

As you kill an alien, it is replaced with a new one. The numbers increase as you survive. In the higher levels, nasty homing aliens appear and they are tough to deal with

You can select one of three options. These are fast start (to skip the easy bit), bouncing bullets and landscape. The last option draws a range of hills along the bottom of the screen. Colliding with this results in death. You can select any of these options in any combination to give the difficulty of your choice

A W

instructions	65%
playability	75%
graphics	85%
value for money	80%

★ ★ ★ ★

Pakacuda £5.99

Rabbit Software, 380 Station Road, Harrow, Middlesex

This is a rather jolly version of Pacman involving the consumption of lots and lots of fish

Not only fish, but eel-type things as well. It doesn't tell you in the instructions, but somehow you will probably work out that eating the eels causes the hunters — some unsavoury octopi — to become hunted (ie eaten)

Joystick only, which I think is a bit of a shame. Not that I dislike waggling a joystick, you understood, but keyboard control allows finer movement

If you are looking for a Pacman look alike, this one is about average. If you really sweat at the thought of fish, look no further

T.D

instructions	45%
playability	70%
graphics	75%
value for money	65%

★ ★ ★

Brain trainers for your ZX micro

Whether you teach others or teach yourself, you'll want to use Ray Elder's programs for the ZX81 and Spectrum. Type them in to test general knowledge — and sharpen up mental arithmetic

Practice makes perfect in learning any subject and if practice is what you need, a micro is the ideal way to get it. It never gets tired or bored or loses its temper, and it's fun to use as well.

My first program is designed to ask questions on any subject or topic. At the moment it's set up for general knowledge, but you can change the questions simply by changing lines 200 to 780.

The format is easy: the first line asks the questions, the second stores the correct answer in Q$, and the third line RETURNS to the main loop.

I've written the program to choose 10 random questions from a possible 20, ensuring that there is no repetition per run.

How it works

50-93 asks which type of sum is required, difficulty level and speed (length of time for answering). These are stored in W$, A and D respectively.
97-110 set variables according to levels inputted. X and Y become limits for random numbers.
120 sets up loop J to give 10 questions.
130-140 get two random numbers (A and B) to limits of X and Y.
150-170 check for valid sums, depending on type, to give positive integer answers.
180 puts sum into a string (S$).
200-210 print the sum.
220-290 empty A$, set up loop I to time specified by input D, get input by INKEY$ (stored in G$). If key D is pressed, then delete last character (number) entered. Spectrum version should also include OR G$ = "d" THEN... Checks valid key, if OK adds it to A$ and prints it.
300 stores the value of the correct answer as a string in C$ ready for checking.
310 calls checking subroutine.
320 goes back for next sum if less than 10.
330 calls end routine, but at 3900 first to modify display.
9500- print additional information before jumping to standard routine at 9110.

```
 50 DIM C$(20)
 60 CLS
 70 LET R=INT (RND*20+1)
 80 IF C$(R)="X" THEN GOTO 70
 90 LET C$(R)="X"
100 PRINT AT 5,0,
110 GOSUB 170+R*30
120 INPUT A$
130 GOSUB 9000
140 IF G<10 THEN GOTO 60
150 GOSUB 9100
160 GOTO 50
196 REM ***********************
```

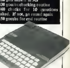
```
 197 REM * QUESTIONS/ANSWERS *
 198 REM ********************
 200 PRINT "WHAT IS THE CAPITAL
OF ENGLAND ?"
 210 LET Q$="LONDON"
 220 RETURN
 230 PRINT "IN WHICH COUNTY IS B
RISTOL ?"
 240 LET Q$="AVON"
 250 RETURN
 260 PRINT "NAME THE RIVER WHICH
FLOWS        THROUGH LONDON"
 270 LET Q$="THAMES"
 280 RETURN
 290 PRINT "WHEN WAS THE BATTLE
OF HASTINGS"
 300 LET Q$="1066"
 310 RETURN
 320 PRINT "WHICH TREE PRODUCES
ACORNS ?"
 330 LET Q$="OAK"
 340 RETURN
 350 PRINT "WHAT IS THE STREET I
N WHICH THE PRIME MINISTER LIVES
?"
 360 LET Q$="DOWNING"
 370 RETURN
 380 PRINT "HOW MANY IS A DOZEN
?"
 390 LET Q$="12"
 400 RETURN
 410 PRINT "WHAT COUNTRY IS AMST
ERDAM THE    CAPITAL OF ?"
 420 LET Q$="HOLLAND"
 430 RETURN
 440 PRINT "WHAT IS THE CAPITAL
OF FRANCE ?"
 450 LET Q$="PARIS"
 460 RETURN
 470 PRINT "NAME THE FAMOUS BRIT
ISH PLANE OFTHE BATTLE OF BRITAI
N"
 480 LET Q$="SPITFIRE"
 490 RETURN
 500 PRINT "WHO IS REMEMBERED ON
NOVEMBER 5"
 510 LET Q$="GUY FAWKES"
 520 RETURN
 530 PRINT "WHICH SPORT IS ASSOC
IATED WITH  WALES ?"
 540 LET Q$="RUGBY"
 550 RETURN
 560 PRINT "WHICH BIRD IS ASSOCI
ATED WITH    SPRINGTIME ?"
 570 LET Q$="CUCKOO"
 580 RETURN
 590 PRINT "HOW MANY IS A SCORE
?"
 600 LET Q$="20"
 610 RETURN
 620 PRINT "WHERE IS MOUNT SNOWD
ON FOUND ?"
 630 LET Q$="WALES"
 640 RETURN
 650 PRINT "HOW MANY IS A GROSS
?"
```

```
 660 LET Q$="144"
 670 RETURN
 680 PRINT "HOW MANY WIVES DID
           KING HENRY VIII HAVE
?"
 690 LET Q$="6"
 700 RETURN
 710 PRINT "WHO LED THE ROUNDHEA
DS ?"
 720 LET Q$="OLIVER CROMWELL"
 730 RETURN
 740 PRINT "WHAT DOES H.M.S.O. S
TAND FOR ?"
 750 LET Q$="HER MAJESTIES STATI
ONARY OFFICE"
 760 RETURN
 770 PRINT "WHO GOT THE TEN COMM
ANDMENTS ?"
 780 LET Q$="MOSES"
 790 RETURN
```

My second program gives drill-type practice on the four rules of number.

How it works

50 sets up C$ to 20 spaces
60-90 clear screen, select a random number, check it has not been asked before (line 80), and set C$ to X as a flag that the question has been used.
100 sets the PRINT position
110 gosubs for question
120 gets answer in A$
130 gosubs checking routine
140 checks for 10 questions asked. If not, go round again
150 gosubs for end routine



```
  10 LET G=0
  20 LET S=0
  30 PRINT AT 5,4,"PLEASE ENTER
YOUR NAME",TAB 6,"AND PRESS NEWL
INE."
  40 INPUT N$
  50 PRINT AT 9,0,"DO YOU WANT TO
 ADD, SUTRACT,TIMES, OR DIVIDE ? (
PRESS + - * OR /)"
  60 INPUT W$
  70 PRINT AT 12,0,"ENTER LEVEL
OF DIFFICULTY 1 TO 6          ( 6 IS
 THE HARDEST )"
  80 INPUT A
  85 IF A<1 OR A>6 THEN GOTO 80
  90 PRINT AT 14,0,"ENTER SPEED
1 TO 5 (5=SLOWEST)"
  93 INPUT D
  95 IF D<1 OR D>5 THEN GOTO 93
  97 LET D=D*10
 100 LET X=9+(90 AND A>1)+(900 A
ND A=6)
 110 LET Y=9+(90 AND A>2 AND A<
4)+(900 AND A=6)
 117 REM ************
 118 REM * MAIN LOOP *
 119 REM ************
 120 FOR J=1 TO 10
 130 LET B=INT (RND*X+1)
 140 LET C=INT (RND*Y+1)
 150 IF W$="-" AND B<C THEN LET
B=B+C
 160 IF W$="/" AND B<C THEN LET
B=B*C
 170 IF W$="/" THEN LET B=INT (B
/C)*C
 180 LET S$=STR$ B+W$+STR$ C
 190 CLS
 200 PRINT AT 2,5,"SUM ",J
 210 PRINT AT 5,13,S$,"="
 220 LET A$=""
 230 FOR I=1 TO D*2
 240 LET G$=INKEY$
 250 IF G$="D" THEN LET A$=A$( T
O LEN A$-(LEN A$>0))
 260 IF G$<"0" OR G$>"9" THEN GO
TO 280
 270 LET A$=A$+G$
 280 PRINT AT 5,14+LEN S$;A$;" "
 290 NEXT I
 300 LET Q$=STR$ VAL S$
 310 GOSUB 9000
 320 NEXT J
 330 GOSUB 9500
 340 GOTO 120
 350 REM
9500 CLS
9510 PRINT TAB 10,"MATHSPEED"
9520 PRINT "TYPE=";W$;" LEVEL ";A
9530 PRINT "SPEED=";D/10
9540 GOTO 9110
```

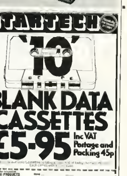
Bamby SOFTWARE

ZX81 16K
BIO-RHYTHMS:
Plot your rhythms on a month by month basis, if you have a printer you can have a hard copy Complete with explanations £5.95

SPELLING TUTOR:
An educational game for those that need help with their spelling. Over ninety per cent successful Fully programmable dictionary £5.95

LYNX 48K
TREASURE ISLAND:
Find the hidden treasure before the monkeys steal it. On the way mind the giant birds, man-eating reptiles and dangerous swamps All on graphics with just enough text to keep you sane £5.95

All available immediately from Bamby Software, Leverburgh, Isle of Harris PA83 3TX. Includes our no quibble guarantee. Access orders welcome by mail or telephone 085982 313. Dealer Enquiries Welcome and 48 hour delivery.


STARTECH
'10'
BLANK DATA CASSETTES
£5-95
Inc VAT Postage and Packing 45p
VIC 20 PRODUCTS
COMMODORE 64
Pack of 10 Data Cassettes
STARTECH 208 Aigburth Rd, Aigburth, Liverpool L17. 051 727-7267

Top Ten programs for the Dragon 32

1	The King	Microdeal (1)
2	Talking Android Attack	Microdeal (–)
3	Nightflite	Salamander (–)
4	Dragon Trek	Wintersoft (–)
5	Space Wars	Microdeal (3)
6	Graphics System	Salamander (–)
7	Katerpillar Attack	Microdeal (6)
8	Chess	Dragon (7)
9	Mined Out	Quicksilva (–)
10	Typing Tutor	Dragon (–)

Compiled by Boots. Figures in brackets are last week's positions

Top Ten programs for the ZX81

1	Flight Simulation	Psion
2	Football Manager	Addictive
3	Fantasy Games	Sinclair
4	1K Games	Sinclair
5	Defender	Quicksilva
6	Chess	Sinclair
7	Asteroids	Quicksilva
8	Scramble	Quicksilva
9	Space Raiders	Sinclair
10	Ship of Doom	Sinclair

Compiled by Boots. Figures in brackets are last week's positions

Top Ten programs for the VIC 20

1	Arcadia	Imagine (2)
2	Wacky Waiters	Imagine (4)
3	Catcha Snatcha	Imagine (6)
4	Asteroids	Bug Byte (7)
5	Panic	Bug Byte (1)
6	Cosmiads	Bug Byte (3)
7	Kaktus	Audiogenic (–)
8	Hoppitt	Commodore (–)
9	Mangrove	Audiogenic (–)
10	Amok	Audiogenic (8)

Compiled by Boots. Figures in brackets are last week's positions

Top Twenty programs for the Spectrum

1	Penetrator	Melbourne House (1)
2	Flight Simulation	Psion (2)
3	Jet Pac	Ultimate (3)
4	Transylvanian Tower	Richard Shepherd (4)
5	The Hobbit	Psion/M House (5)
6	3D Tanx	dk'tronics (6)
7	Ah Diddums	Imagine (7)
8	Horace Goes Skiing	Psion/M House (7)
9	Hungry Horace	Psion/M House (9)
10	Chess	Psion (10)
11	Planetoids	Psion (11)
12	Test Match	Computer Rentals (12)
13	3D Tunnel	New Generation (13)
14	Ground Attack	Silversoft (14)
15	Time Gate	Quicksilva (15)
16	Orbiter	Silversoft (16)
17	Arcadia	Imagine (17)
18	Starship Enterprise	Silversoft (18)
19	Horace and the Spiders	Psion/M House (–)
20	Psst	Ultimate (20)

Compiled by W H Smith. Figures in brackets are last week's positions

U.S. SCENE

Whiz Kids show to go ahead

A few weeks ago I mentioned that a pilot film had been produced, called Whiz Kids, which was to be the possible forerunner of a TV series of the same name.

Well, it turns out that CBS (a major American commercial network) is planning to make a series out of the idea, regardless of how well the pilot show does. This is very unusual, as networks typically wait for the poll results before commiting themselves to such a financial burden.

Apparently preliminary testing has resulted in a favourable response to the pilot, and anyway CBS want to be the first network out with an action show in which the personal computer features heavily.

As I also mentioned in the previous column, the show will feature kids fighting crime with the use of computers, and will show technology (according to the producer) realistically but slightly ahead of state of the art.

That will be interesting all in itself. With giant strides being made so rapidly, slightly ahead when the series is shot may be slightly behind when it is finally shown. I shall let you know how it all turns out come September.

Coleco, the American video game company, stole the show at the recent Summer Consumer Electronics Show in Chicago. Their new home computer, the Adam, includes 80K of RAM, tape drive, a word processor in ROM, and a letter quality printer, all for under $600!

As anticipated, the computer is designed to be an extension of the already available Coleco video game player, and all software and games are compatible between game player and computer. Present owners of the game player can update for about $400.

The Adam uses a Z80 which addresses 64K, and a TI device that is designed to drive the 16K RAM devoted to screen graphics. The printer and the keyboard each have their own processor chips too.

Rather than go head to head with other small computers, Coleco has concentrated more on the software end. Contrasting with other computers of similar price which come up in BASIC, when a user powers up the Adam, the resident word processor called Smart Writer comes up.

This program allows a 78 column display, and functions very closely resembling those available on a conventional typewriter.

A 64K expansion module is also planned. The company says this will allow versions of, say Donkey Kong, with more features than the arcade version with excellent graphics.

Adam will get plenty of software from a type of cassette called digital data packs. This looks like a conventional cassette machine, but stores data digitally rather than by analog methods. According to Coleco, this allows for a data transfer rate rivalling the floppy disc. Each pack could store as much as 500K, which translates to about 250 text pages.

Interestingly enough, the Adam will come with a version of BASIC on data pack that will be source compatible with Applesoft. Since more Apples are used in schools than any other single brand of computer here, Coleco's thoughts run along the lines that Johnny and Mary can write programs at school on the Apple, and bring them home to run on the Coleco. Sort of like getting a less than half price Apple.

Regarding the letter quality printer, it uses a standard daisy wheel, and will be able to print up to 80 columns. Coleco is claiming 120 words per minute throughput.

Even with all the hoopla at its so called debut, company officials did not deny that the exact specs for the machine were still not firm, and that they will be unable to meet demand for some time to come. Still, the machine sounds like it will be capable of doing many things very well for such a low price. I shall look forward to seeing an actual unit.

That's all for this week. See you next time.

Bud Izen **Fairfield, California**

ORIC-1, VIC-20

The meanest game of space invaders you'll ever play!

only £5.50

FEATURES

- Three invader types
- Written in machine code
- Mystery scoring mother ships
- Bonus base every 3000 points
- High score register
- Full sound effects and colour

You must defend earth from the hordes of bomb dropping space invaders using your earth bound laser base. The more invaders you hit the faster they come, leading to a gun blazing shoot out as finale

A great shoot-'em-up, all action arcade game, for the 16K or 48K ORIC-1 or unexpanded VIC-20

Send cheque or P.O. for £5.50 (postage paid) stating computer type and memory size to

ARCADIA SOFTWARE

FREEPOST SWANSEA SA3 4ZZ

MUSHROOM MANIA

For the 16K or 48K ORIC-1

So fast, it'll take your breath away!

only £5.50

FEATURES

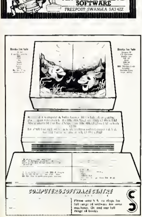
- Written entirely in MACHINE CODE
- Over 50 skill levels
- Random scoring spiders
- One or Two Player Option
- Hall of Fame
- Full colour and sound
- Bonus lives every 10000 points
- Deadly PACPERSON attacks

Blast the fast moving centipede, as it snakes down towards you, in the depths of the green forest. Score points by shooting-up mushrooms and the deadly spiders. But beware of the hungry PACPERSON which will gobble anything in its path. The higher your score rises, the faster the action becomes, until it is only a screaming blur of colour and sound.

Send cheque or P.O. for £5.50 (postage paid stating computer type and memory size to

ARCADIA SOFTWARE

FREEPOST SWANSEA SA3 4ZZ

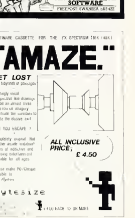


Books for Sale

Books for Sale

COMPUTER & SOFTWARE CENTRE

Please send S A [illegible] for full range of software for these machines. Or and our full range of books



SOFTWARE CASSETTE FOR THE ZX SPECTRUM (16K / 48K)

"AMAZE."

GET LOST

in a labyrinth of passages

Excitingly visual Perspective line drawings exhibit an almost three dimensional imagery. Penetrate the corridors to locate the elusive exit

CAN YOU ESCAPE ?

Completely original. Not another arcade imitation!! Hours of addictive and amusing entertainment. Suitable for all ages.

ALL INCLUSIVE PRICE, £ 4.50

Please make PO/Cheque payable to Bytesize

Bytesize

£4.00 EACH 10 OR MORE

Bamby
SOFT
WARE

For

DRAGON
TI-99/4A
SPECTRUM 48

DRAGON

ALIEN ODDESSY (PARTS 1 & 2) £9.95
The first two parts of a gigantic six part adventure game set on an alien world.

SCANNER 13 £8.45
Destroy the drones and their master, but you'll need to think. No ordinary invader this!

BOPSWIZZLE £5.95
A Splendiferous Fun Game. Find the treasure but avoid the Smoochers, Yerkles and Wiggles

For the TI-99/4A

ALONE AT SEA £6.50
Try and escape the sinking ship, but don't forget your supplies which are hidden somewhere.

K-64 £6.50
A Mind-Bender. Cover the squares once only using the knight and its' valid moves. Easy?!

For the Spectrum 48

MYSTERY MANOR £6.50
Find the murderer before he (or she) finds you and your career as Detective Solvitt.

MASTER CODE £6.50
Based on the famous game. Try your skill against the computer. You can beat it.

All available immediately from Bamby Software, Leverburgh, Isle of Harris PA83 3TX. Includes our no quibble guarantee. Access orders welcome by mail or telephone: 085982 313. Dealer Enquires Welcome and 48 hour delivery.

Mr. Chip
SOFTWARE

VIC 20 GAMES AND UTILITIES

BUGSY (Joystick Only) £5.50

This is a Minefield with a difference as you step on the stones whilst collecting purple boxes which give you both time and points they disappear from beneath your feet. DO NOT DESPAIR! "BUGSBY" will randomly replace the stones but avoid bumping into him or its sudden death! An original compulsive and challenging game

JACKPOT
This is it the ultimate Fruit Machine Program for the VIC. You will be truly amazed by the Graphics. Colours and nine different tunes & sound effects of this remarkable Program. With nudge, hold & respin, can you win the JACKPOT. 100% Machine Code £5.50

SWAG-MAN — (3K expansion)
Chase the bullion van around the streets of New York picking up the swag but beware you must defuse the time bombs to gain extra time and fuel, full colour and sound effects a very original game £5.50

MINI-ROULETTE — PONTOON — HI-LOW
Three great games of chance for the VIC try to beat the computer, hours of fun full colour sound effects and tunes £5.50

DATABASE — create your own files and records on tape £7.50

BANK MANAGER — Computerise your bank account £5.00

SUPER BANK MANAGER — A full feature version any memory size but needs 3K expansion £7.50

M/C SOFT — Machine code Monitor and Disassembler any memory size £7.50

COMMODORE 64 GAMES AND UTILITIES

LUNAR RESCUE — Our own version of that popular arcade game £7.50

PONTOON — ROULETTE — ACE'S HIGH
More powerful versions that make three great games of chance for the 64 £7.50

M/C SOFT 64 — Assembler and Disassembler, with decimal to hex converter everything our program for the VIC will do and more £7.50

BANK MANAGER 64 — As our Super Bank Manager but for the 64 £7.50

Full documentation with all utility programs

Other software available for the VIC and Commodore 64 send for free brochure including **RABBIT SOFTWARE** for the VIC at our Special Offer of £7.50 each or buy two or more at £7.00

Send Cheques/PO's to: **MR CHIP SOFTWARE**

Dept HCW, 1 NEVILLE PLACE, LLANDUDNO, GWYNEDD, LL30 3BL. Tel: 0492 49747

WANTED: HOT SHOT SOFTWARE WRITERS. PHONE AND ASK US ABOUT OUR FAIR DEAL POLICY AND TOP ROYALITIES

DEALER ENQUIRES WELCOME

Send your letter to Letters, Home Computing Weekly, 145 Charing Cross Road, London WC2H 0EE. Don't forget to name your computer — the best letter could win £5 worth of software. Queries cannot be answered on this page

Activate Neutralise

The gremlins seem to have got at my Atari program, published on p 25 of HCW 15, and taken away line 5020 The missing line is as follows

```
5020 FOR A-15 TO 0 STEP
  1 SOUND 0,75 10,A
  FOR E-1 TO 5 NEXT E
  SOUND 0,0,0 0 NEXT A
   GOTO 1000
```

David Ryan, Bannbridge, N. Ireland

TI's software shortage

I am writing to congratulate you on the TI-99/4A program published in your March 29 April 4 edition, entitled "Playing around with pixels" I would like you to extend my admiration to the compiler, David Gray

The expertise, extended conception and imaginative projection shown in the construction of this program are, in my opinion, trulay outstanding Indeed, my grandchildren use it as a construction game, although I have noticed the elder one (aged 9) making semi secretive notes to the hexadecimal codes of her favourite creations For future reference, I presume

Now my plea As you may well know, there is a desperate shortage of cassette software for the TI. Many of the few cassettes offered are repros from Vince Apps book "35 programs for " and with all due respect to Mr Apps who knows his stuff, the programs in this book are for the struggling novice to insert himself, and therefore more than a little on the simple side

The TI is being promoted on TV and in the High Street shops at present, and this, coupled with price reduction and cutting plus the £50 value free offer, is bound to increase the number of TI owners, many, like myself, incapable of originating really first class progs

There are cartridges of course, but these are too expensive for us low budget enthusiasts to buy and in any case, I feel sure that some of us would welcome progs more mind challenging than Space Invaders or Mazes

So **please** could not the talents of the writer of the Pixel prog , or any others with similar capabilities, let us have some interesting stuff for the TI 99/4, this nice little machine that has been so dreadfully neglected by the cassette software producers

John Woods, Halifax, West Yorks

HCW has now started to publish reviews of some TI software which we hope will be of use to IT owners

A satisfied customer . . .

Ever since your first edition people have been writing in to complain about ordering software and hardware by mail order and receiving poor goods and poor service

Another issue that was discussed in early editions was the forthcoming shakeout in the software market, with predictions that a lot of small firms are going to find it hard and go out of business

As you may or may not know, nearly all small firms are mail order only operations All these complaints make the business look untidy and disorganised — this is very damaging, and can scare potential customers away

I have only seen about two letters of praise for computer firms in your magazine, and the same applies to other magazines — too much complaining and not enough praise

I have had great service from all mail order firms I have dealt with I have never had to wait longer than a week for anything I have ordered and I would particularly like to congratulate Texas Instruments on their service If you bought a TI 99/4A before 31 January this year you could claim for a £50 rebate Within two weeks I received a cheque for £50, and I consider this great service

A Tanner, Headington, Oxford

. . . But one's not so happy

I recently bought a TI 99/4A and, feeling very proud, sent off for my free offer of the speech synthesizer and games paddles with Basic cartridge and booklet It was quite a saving on the price for me

But sad to say, I an still waiting We did not realise that on some of the computers, the serial numbers have not been stamped in, and the company wouldn't accept the order without a serial number

After telling Texas Instruments twice and informing the shop I am still waiting to find out what's happening

Are the computers really made in Texas? How come only a few slipped through the net?

T Wilkins, Birmingham

Kirsty Clift of TI said "Most of the TI 99/4A for the UK market come not from Texas but from Rieti, Italy, and it was a change in the manufacturing process there that caused the trouble

"The few computers that were sent out without a serial number stamped on did have a sticky label with a date code number, though and if your computer hasn t got a serial number, the date code number will do just as well for the offer

"We've had some confusion over our free offers and I d just like to make it clear that there are two of them The first is for free games paddles, a games cartridge and a Basic tutor cassette, and is available if you brought a TI-99/4A between May 3 and July 2

"The second is for a free speech synthesiser or a free program recorder, and is available for those who bought six TI plug-in games cartridges between April 30 and July 2

Review it again, T.D.

I'm writing to congratulate T D (whoever he may be) on his brilliant write-up of Crazy Climber/Apple Bug in HCW 15 It was witty, informative and very eye-catching

I only wish more magazines would do it this way It would make the reviews so much more enjoyable to read

A MacDonald, Sudbury, Suffolk

COMPUSENSE
Software for Dragon 32

PO Box 169, Palmers Green,
London N13 5XA
Telephone 01-882 0681 (24 Hr) and 01-882 6936
Offices at 286D Green Lanes (9.45-6.00 Mon-Fri)

Software on plug in cartridge for the Dragon 32 and 64

HI-RES £25 30
Our popular 51 × 24 BIG SCREEN upgrade with redefinable character sets (FRENCH, GERMAN, SPANISH, SWEDISH, DANISH, ITALIAN) BASIC works as normal with extensions for PRINT and CLS and SPRITE GRAPHICS. A better keyboard routine gives AUTO REPEAT and TOUCH TYPING

EDIT + £34 50
full screen editor with lots of facilities. Includes HI RES. Available end July 1983

DASM £18 95
machine code assembler. Easy to use and excellent value for money. Just read the reviews and you'll be convinced. With Manual and reference card

DEMON £18 95
our powerful monitor. Now with DUMP to PRINTER. An essential tool for the serious programmer

DASM/DEMON £30 45
the ideal combination for developing machine code on the DRAGON

Please Add 50p for postage and packing

Disks — Premier Delta system now in stock
Delta Controller £99 95 Delta 1 £299 95 Delta 2 £345 95
add £4 50 for postage

Printers — with free cable and screen dump program listings
Epson RX 80 £342 70 Epson FX 80 £503 70
add £12 50 for carriage

Demonstrations at our offices — by appointment
All prices include VAT. Send large SAE for catalogue

JUPITER ACE USERS CLUB

"probably your best independent [illegible] of your machine"
(Personal Computer News)

THE best range of software. Add-on memory. ACE USER newsletter four times a year. Software to link the Ace to the cheaper printers (ZX, Tandy, Amber). How to add a full travel keyboard. Utility software includes Disassembler, Toolkit, Character Designer, Strings. Games in both 3K and 19K.

Subscription £7 pa. S.A.E. for details

REMSOFT
18 GEORGE STREET, BRIGHTON BN2 1RH

ORIC GAMES PACK

includes
1 **LANDER** safely land your lunar spacecraft
2 **BREAKOUT** knock out the bricks to gain points
3 **NIM** Play the traditional game against Oric

All three games for only £4.95 (inc. P&P)
Send Cheque/P.O. to **SHARDS SOFTWARE 189 ETON ROAD, ILFORD, ESSEX IG1 2UQ**

DON'T MISS THIS INCREDIBLE OFFER!
50 GAMES £9·95

YES, 50 GAMES! one cassette for all the following
FOR YOUR MICRO

sinclair
SPECTRUM
ZX81 LYNX
DRAGON
ATARI VIC 20
apple
BBC A/B
ORIC-1

CASCADE SOFTWARE
CASCADE HOUSE
[illegible] LANE
HARROGATE
[illegible]

SUPPLY CASSETTE 50 FOR ______ COMPUTER
I enclose cheque/PO

Name
Address

ORDER NOW!

# AGF PROGRAMMABLE JOYSTICK INTERFACE
for
sinclair ZX Spectrum 81

ONLY 32.95 +£1.00 P&P

JOYSTICKS

ONLY £7.54 inc VAT+P&P

NAME OR BUSINESS
ADDRESS

SEND C.W.O. NO STAMP NEEDED [illegible] HCW17
FREEPOST [illegible]

QTY	ITEM	ITEM PRICE	TOTAL
	[illegible]	28.95	
	[illegible]	7.54	
	PACK [illegible]	1.00	
	[illegible]	FREE	
	ZX81 [illegible] SPECTRUM [illegible]	FINAL TOTAL	

Best of British programming?

English software is flying the flag in the US-dominated Atari software market. Its boss Phillip Morris talked to Candice Goodwin about his plans not just to compete in the market but to lead it

Considering the number of software companies there are in the UK, it may seem eccentric of Phillip Morris to have called his firm The English Software Company But then, you've got to remember that he had the American market in mind

He said "Americans are very keen on English people and products I think it's because of the Royal Family"

English's original logo — a cottage in a rose garden — was designed to have transatlantic appeal For UK buyers, though, Phillip has dreamed up a more high tech logo with a video effect He said "In this country, cottages are associated with cottage industries — which seems a bit silly since we're in the middle of Manchester"

English is an offshoot of Phillip's shop, Gemini Electronics, and shares the same premises at 50 Newton Street, Piccadilly, Manchester Gemini sells computer chess games, Atari games machines, Commodore and Atari micros and a range of software

Gemini itself developed out of an earlier business Phillip had selling computer games machines by mail order — so he's been in the computer games business in one way or another since 1978

But the idea of selling his own brand of software was sparked off by one of Phillip's customers, Steven Riding Having bought an Atari micro from Gemini, Steven got interested in machine code programming The result was Airstrike, a cross between Scramble and Defender

Steven offered Airstrike to Phillip, who started to sell it by mail order as well as through the shop But he also had the bright idea of trying to beat the Americans at their own game by selling Airstrike in the US — where the Atari is, of course, a giant seller

So last summer Phillip's brother Brian set off to seek the company's fortune in sunny California — and that's when the name and logo were originated

The made-in-England theme extends to Phillip's programming team, which he describes as "the best of British programmers" But finding good programmers has been and continues to be a problem

The problem is that the Atari uses three separate processors — it has special sound and graphics processors in addition to the main processing chip Most home micros only use one all-purpose processor

So would be machine code programmers have to understand how the three processors work together, as well as knowing how to make the most of each processor's special abilities

"You have to learn a lot more about the Atari before you can program it", according to Phillip "It can take six months to write a program from scratch"

A lot of Phillip's programmers got interested in programming when they bought an Atari from him He reckons that, although most people initially buy the Atari micro for games, they start programming because of the machine's potential — among other things, it can give you 256 colours on screen at once But that's not so surprising when you remember that it uses the same chips as the Atari arcade machines

As well as Airstrike, English Software's range now includes four more games, on disc as well as cassette, and three utilities Six more games are scheduled for the end of July, which will be on cartridge as well as cassette

By the end of the year, Phillip thinks English will be the largest Atari software house in the UK — apart from EMI, that is He wants to give Atari owners a better deal firstly by informative advertising, with a screen picture and description of every game, and secondly by competitive pricing

English cassette games cost £15 95 — about a third cheaper then equivalent US products — and in the long term he hopes to bring the price of cartridges down from £30 to around the £20 mark "Mass production plus new types of chips will mean that cartridges will soon be cheaper to produce", he said

Phillip also plans to explore the demand for very low-priced games for the Atari later in the year, by offering two or three games for £5 if they are bought along with a £15 game but he said he didn't intend to lower his standards

"Atari owners are very selective in what they buy", he said "They might buy five games a year, instead of one a week like you would for the Spectrum But those five games will have lasting appeal" High-quality graphics and an original them is what he is aiming for in all English's games

The pick of the English crop will go over to the States to tackle the Atari software market on its home ground Though the competition over there may be formidable, the potential is enormous with over half a million Atari machines to cater for

And when Atari brings out its new machines, which are compatible with the 400 and 800, that potential will increase still further

Meanwhile, back in the UK, English Software's programs will be appearing on television in the north east this August Granada TV will be featuring Xenon Raid as the competition game on its Chip-In series

"The programme is being made in Granada's Liverpool studios", Phillip said "So we changed the backdrop of Xenon Raid to look like the Liver buildings"

Pointing the way to new trends in Atari software from left to right, Steve Riding, John Brierley, and Philip Morris himself

HOME COMPUTING WEEKLY CLASSIFIED

Lineage:
35p per word — Trade
25p per word — Private
Semi display £6.00 per single column centimetre
Ring for information on series bookings/discounts

All advertisements in this section must be prepaid
Advertisements are accepted subject to the terms and
conditions printed on the advertisement rate card (available on request)

01-437 1002
EXT 282.

Send your requirements to:
Julie Bates
ASP LTD.
145 Charing Cross Road,
London WC2H 0EE

ACCESSORIES

ZX81 High Res Graphics Unit
£30 (ex I VAT)
Tel William Haynes 01 969 0819
Tech for Living
Notting Dale Technology Centre
191 Freston Road London W10 6TH
cheque PO (add 15% VAT)
plus 75p p&p

ATARI 400 800 Supaklone don't risk losing your favourite programs! Supaklone copies most M C Basic cassettes (including bootable) £15 95 (post free) Supaklone, 21 Trent Ave Huntington York YO3 9SE

COMPUTER ADDICTS At last a purpose built trolley for the home computer and accessories So convenient to keep your equipment safe tidy and ready for use on a mobile unit How have you managed without one Solid wood frame recessed upper & lower shelves Prices from £18 25 + p&p 55p Send now for further information to Selcraft Sussex Ltd 32 Walpole Ave Worthing Sussex BN12 4PL SAE appreciated

Dust Covers available for any computer printer etc BBC TI Epson £3 95 Dragon Atari, VIC 20 £2 95 Sharp MZ 80A K £4 95p for others please phone or write to Sherborne Designs Victory House 8A The Bank North Bradley Trowbridge Wilts Tel 02214 4425 Also made to measure service Dealer enquiries welcome Access and Bar[illegible]

BOOKS

BOOK SALE?
IT COULD BE YOUR BOOKS FOR SALE.
RING 01-437 1002
EXT 213 NOW.

ATARI OWNERS
YOUR OWN MAGAZINE
PAGE 6 is published bi-monthly and [illegible] ATARI [illegible] programs [illegible] from America and elsewhere [illegible] special [illegible]
[illegible] Can you afford not to miss it?
Subscription £[illegible]
Page 6 Magazine Dept H 18
Underwood Close Parkside Stafford
Tel 0785 41153

CLUBS

Swap Club [illegible] for current list stating computer make model and software name/maker/RAM S A D Software 46 Lothian Drive Clarkston, Glasgow

COURSES

BASIC PROGRAMMING Easy to understand beginners correspondence course Tel 09285 69948 or SAE to M C Computer Services 52 Shepherds Row Runcorn Cheshire WA7 2LG

HARDWARE

Apple Computers peripherals and software bought and sold, new and used printer supplied Bracknell (0344) 84423

Atari 800 48K program recorder 822 printer educational and games software joysticks £600 ono Stoner Minehead 3441

PRINTER BARGAINS
Epson RX80 [illegible] £250
Epson FX80 [illegible] £379
[illegible] £40
Prices include VAT [illegible] carriage free
Camels-Micro
10 Kneesworth Street Royston Herts
Tel Royston (0763) 4006[illegible]

ATARI VCS with joysticks Paddles Combat and E5 cartridges (Asteroids Defender Missile Command, Star Raiders Video Olympics) £100 o n o Tel 0204 76051

FOR HIRE

To Hire [illegible] computers from ZX81 upwards [illegible] to Business and Computer Services 292 Caledonian Rd N1 1AB Tel 01 607 0157

Citizens of Cartridge City rent Atari Roms at low cost Discounts on Software purchases Emigration forms from Cartridge City 25 Gairnside Drive Aberdeen AB1 7BH

REACH THE RIGHT AUDIENCE AT THE RIGHT PRICE
RING 01-437 1002
EXT 213.

Oric Software Library Two weeks hire £1 Annual Membership £5 Stamp for list Les Wilson Penallick Tintagel Cornwall

RECRUITMENT

If you
have written or are
writing an original
machine code
arcade
quality game for the
VIC-20
or the
Spectrum,

WE HAVE AN IDEA

which could make your
game

THE BEST
SELLER
IN EUROPE

INTERESTED???
Tel 01 861 1088
NOW

THIS SPACE IS VACANT.
REACH THE RIGHT AUDIENCE AT THE RIGHT PRICE BY PLACING YOUR VACANCY IN THIS SECTION.
RING 01-437 1002
EXT 213.

COMMISSION
AGENTS
REQUIRED

For a new range of microcomputer consumer durables excellent commission and repeat business phone or write to

Workstation
Prospect Mill
Hindle St
Darwen
Lancs BB3 1DF
Tel (0254) 775727

FOR SALE

VIC-20 cassette unit, joystick and software £110 Tel 01 761 5193 after 6pm

SERVICES

MICRO USER T SHIRTS
EPSON SPECTRUM SIRIUS 1
SHARP SORD ZX81 ORIC I
MICRO FUN T SHIRTS
1 [illegible] Friendly
2 Have You Seen My Peripherals?
3 81 Power
4 Fancy a Quick Byte?
Available in white pale blue or red
100% cotton in small medium large & Xlarge
£3 25 each inc [illegible] Mail Order only from
One Per Cent Sports Unit 12 [illegible] Lane
[illegible]
CLUB T SHIRTS ALSO PRINTED

SOFTWARE APPLICATIONS

MZ 80A MZ-80K PROGRAMS Business utility games educational List SAE DCS 38 South Parade Bramhall Stockport

ALL YOUR CASSETTE NEEDS
Blank cassettes C15 with case 40p each
Labels in Blue White or Yellow 20 for 36p Inlay cards in Blue Red or Yellow 20 for 60p Library cases 9p each
Postage on each complete order 55p
Stonehorn Ltd (HCW), 59 Mayfield Way Barwell Leicester LE9 8BL

SPECTRUM KOPYKAT £4 95
SIMPLY THE BEST [illegible] a key for back up copy Any ZX Spectrum program easily duplicated Programs [illegible] 41 9K (6 7K for 16K [illegible] with ease 100% machine code Plus FREE Tape Header Reader program IMMEDIATE DESPATCH Send cheque PO to MEDSOFT
61 Ardeen Rd Doncaster S Yorks DN2 5ER
IT CAN EVEN COPY ITSELF

WIN THE POOLS
SPECTADRAW 2 is a pools prediction program for the 48K ZX Spectrum or microcomputer
The program is supplied complete with a database type containing data on over 7500 matches and a comprehensive instruction manual
Program Database (both on a high quality cassette) and instruction manual £12 95 inclusive
(Cheques/PO payable to B S McAlley) or SAE for details
Spectadraw 1 Cowleaze Chinnor Oxford OX9 4TD

ATARI CHARACTER GENERATOR 400/800 16K

Design your own character set (all 128 characters) on screen. Edit characters in groups of 4 at a time for larger designs.
Redefined set can then be saved to cassette and incorporated in your own programs.
Features: Full editing and data display.
Supplied on cassette £3.50 inc. p&p
P. F. Software, 15 Melrose Ave,
Littleborough, Lancs OL15 9JD

DRAGON WORD PROCESSOR. Full features, cassette based, 20K text buffer. Includes full manual. Stop playing games! £10 from R. J. Crowther, 141 Hollyfield, Harlow, Essex.

SOFTWARE GAMES

Superb new game for
Spectrum / CBM 64
TRAX!
100% machine code action
available now
£5.50
Cheap at the price!
Soft Joe's Business Centre
Claughton Road, Birkenhead,
Merseyside L41 6EF
Tel: 051-647 8616

COMMODORE 64 GAMES

Pakacuda	£9.99
Ape Craze	£9.99
Escape MCP	£9.99
Centropod	£9.99
Sketch and Paint	£9.99

p&p 50p. Cheques/PO's or write for details to:
Rigenet Software, PO Box 28,
Ascot, Berkshire SL5 7BB
Tel: 0990 22707
Trade Enquiries Welcome

BAMBY SOFTWARE

Leverburgh, Isle of Harris PA83 3TX
Tel: 085 982 313

INTRODUCE ORIGINAL GAMES FOR DRAGON 32

Golden Apples. Steal the apples, then defeat the warlock. £5.99
Planetary Trader. Choose your cargo (that's the easy bit!) then deliver it. £5.99
Surprise Spells grants a magic ring, but not another Lord of the Rings. £8.49
Mini games: 4 games per tape, simple but compelling. £5.99
All prices include Postage & Packing and a no quibble guarantee.
Write to us at the above address, or ring us (any time) between 9a.m. and 9p.m.
(Alternative phone no. 085 982 234)

DRAGON 32 & TANDY COLOR

FREE

Over 850 people at recent exhibitions have tried but unable to complete this new challenging board game. We are giving away Free to the first 10 people to complete correctly our Knights program.
4 different Adventure Games all £10
Send £5 for a copy of

ROVING KNIGHT
16K EXT BASIC

State if Tandy or Dragon

Flatbell Ltd (HCW), 9 Franklin Road, Haddenham, Bucks. HP17 8LE
Send SAE if Catalogue required

CHRISTINE COMPUTING

TI99/4A Specialists software games: North Sea, Astro Fighter, Blast It!, Code Break, Core!
All the above £3.50 each, £6.50 for 2, £9.00 for 3. Handy Sub Programs (tape and booklet) £4.50

Help and advice service. For full details send S.A.E. to: 6 Florence Close, Watford, Herts

LANTERN SOFTWARE TI99/4A

High quality arcade games and utilities inc. Operation Moon and Superb Battlestar Attack. S.A.E. for details to: 4 Haffenden Road, Tenterden TN30 6QD

NEW BBC DEALER IN ESSEX

Estuary Software Products now have BBC's in stock together with a wide range of software and accessories for the BBC and other leading micros, eg. ZX81 and Spectrum.
Hitchikers Guide To The Galaxy for the Spectrum £7.95, Apple II £16.95
261 Victoria Ave, Southend-on-Sea

VISA. Credit card holders may phone their orders: (0702) 43568

Paul Gillett software games for the ZX81 (16K). Blockade Runner — addictive fast action M.C. game. Complete four — a game of strategy as reviewed in ZXC June/July. £3.95 each to: 38 Cromwell Way, Kidlington, Oxford OX5 2LL.

QUALITY ORIC SOFTWARE

THE WORD
Up market Hangman with editor & sound
DEATH TRAP
Moving graphic game with facility to design your own graphics
MASTERMYNDE
The fully expanded classic 1-4 players, multi [illegible] levels [illegible] etc.
Tapes [illegible] £4.95 each
SAE for full range & price list
Cheque/PO to: [illegible] Technology,
Lock Street, Savile Town, Dewsbury,
West Yorkshire WF12 9BW

SOFTWARE FOR TANDY COLOR & DRAGON

REF			PRICE
ADVENTURES			
1001 LOST IN SPACE		16k	5.00
1002 DRACULA'S CASTLE		16k	5.00
1003 DEATH PLANET		16k	5.00
1004 FLOATING BOMB		16k	5.00
GAMES			
2001 STAR TREK	Find the enemy and destroy him	16k	[illegible]
2003 A MAZE IN	Seek and destroy the monsters in the maze as quickly as you can, you'll take the honours.	16k	5.00
2004 OWNERSHIP	Similar to MONOPOLY	32k	10.00
4001 GAMES PACK 1	5 Different games	4k	5.00
3007 GAMES PACK 2	5 Different games	4k	5.00

Send SAE for catalogue. State if TANDY or DRAGON. All prices include P&P and VAT.
Cheques or Postal Orders to:
FLATBELL LTD (DEPT HCW)
9 Franklin Road
HADDENHAM
BUCKS HP17 8LE

TEXAS TI-99/4A SOFTWARE

GM1	Lunar plot (graphics)	£3.95
GM5	Haunted House	£4.95
GM6	Sorcerer's Castle	£3.95
GM17	Forbidden City	£4.95
GM19	Devil's Island	£4.95
GM21	Chalice (graphics)	£4.95
GM22	Bomber (graphics)	£4.95

THE TEXAS PROGRAM BOOK
(35 programs for the TI99/4A) £5.95

Send s.a.e. for full list. Orders under £6 please add 50p p&p. Orders over £6 post free. Send cheque or PO to:

APEX SOFTWARE (HCW)
115 Crescent Drive South
Brighton BN2 6AB
Tel: Brighton (0273) 36894
Access/Barclaycard welcome

TEACH YOUR CHILD

On Spectrum 16K or 48K
Hidden Letters: Reading Comprehension and Spelling Game
£4.50 inc. p&p. Poppy Programs
Richmond House, Ingleton,
Carnforth, Lancs LA6 3AN
Computer Trade Association
Member

Oric-1 48K Yahtsee and Othello. £3 each, £5 both. S. Coxall, 56 Millbeck Lane, Cottingham, Hull HU16 4EU

NAME THAT SONG! For any Spectrum (state 16K or 48K). Different game each time. 100+ songs! Bid A Note, Spin The Wheel and The Clock. Cheques or POs for £6.95 to WHIZZ QUIZ, 163 St Paul's Road, Birmingham B12 8LZ. Watch out for 100 PEOPLE SAID — coming shortly.

Adventure The Orb. Excellent game with save facility for VIC + 16K or Dragon. Only £5 inc. p&p. D.W.H. (TB), 59 Beamish Rd, Canford Heath, Poole, Dorset.

TI 99/4A (16K)

EXCLUSIVE OFFER TO HCW READERS FOR THIS WEEK ONLY
You've read the review now get the programs, 2 for the price of 1**
NEWMARKET a horse racing game for 1 to 6 gamblers
STARSHIP—an adventure in the SUPERNOVA deep in space
These two programs for the price of one (£4.95p)
Send cheque/PO to:
P. J. PROGRAMS
251 Albert Road, JARROW NE32 5RS
SAE for list

WANTED

Programmers Wanted
We require quality programs for most micro's and experienced programmers to undertake contract work. We pay cash fees, royalties and distribute in the UK and USA.
Tel **(0256) 25107** *or write to:*
Dream Software, P.O. Box 64, Basingstoke, Hants. RG21 2LB

ATTENTION PROGRAMMERS! We are still seeking good quality original games and educational programs for the Spectrum. Contact us now for immediate valuation. Dollgrove Ltd, 10A St James St, Covent Garden, London WC2.

WANTED GAMES/SOFTWARE

Well established International Marketing Company now branching into Computer Software for Entertainment & Education.
We are looking for original games programmes for
VIC 20 • SPECTRUM • ORIC 1 • BBC
We pay Top Royalties for good original material. Contact:
International Marketing Services
(Software Division)
143/145 Uxbridge Road, London W13
Tel: 01 567 6288

We are currently looking for original debugged games for any machines. Programs preferably over 8K. If you have any programs that fit those criteria call us on 085 982 313 to discuss remuneration. Bamby Software, Leverburgh, Isle of Harris PA83 3TX.

If you
have written or are
writing an original
machine code
arcade
quality game for the
VIC 20
or the
Spectrum,

WE HAVE AN IDEA

which could make your
game

THE BEST
SELLER
IN EUROPE

INTERESTED???
Tel: 01-861 1088
NOW

SOFTWARE EDUCATIONAL

DRAGON 32

Building [illegible] and [illegible] learning [illegible] [illegible] age [illegible].
It is designed by [illegible] teacher [illegible] [illegible] the micro [illegible] [illegible] language usage. An effective and valuable teaching aid [illegible].
Pandle Programs, PO Box 2, South Shields, Tyne and Wear NE33 1EX

USER GROUPS

ORIC-1 OWNERS

Tangerine [illegible] ORIC-1 [illegible] T.U.G. [illegible] first. An independent users group with a solid reputation for [illegible] system support. Monthly newsletters, meetings, software, hardware reviews. Advice and lots more. We have a proven record of performance on our system. [illegible] T.U.G. [illegible] We Do! Send £1 plus S.A.E. (9x4) for sample newsletter and details.

Tangerine Users Group
1 Marlborough Drive
Worle, Avon BS22 0DQ

NATIONWIDE SHOPS & DEALERS

Computerama
The Midlands Home Computer Specialists

FOR BBC, SPECTRUM & ALL LEADING MICRO'S
STAFFORD 59 FOREGATE ST
TEL 0785 41899
STOKE ON-TRENT
MARKET SQUARE ARCADE
TEL 0782 268620

TO BE INCLUDED IN THIS SECTION RING 01-437 1002

SOFT MACHINE

A large selection of the very best software books and some accessories available for ZX81 Spectrum BBC Dragon VIC 20 and Commodore-64 microcomputers at
3 Station Crescent, Westcombe Park London SE3
Tel 01 305 0521 or send SAE for free catalogue (state which computer)

LYVERSOFT

66 LIMESTREET
LIVERPOOL
L1 1JN
051 708-7100
Open 6 days a week 9 till 5 30
We specialise in our own VIC 20 software
The Largest stockists of Home Computer Software in the North West

THE GAMES SHOP AND COMPUTER SOFTWARE CENTRE TEL NO 0224-643740

3 Waverley Place Aberdeen AB1 1XH
Stockists of Spectrum Dragon VIC 20 and Commodore 64 software Extensive selection of books and magazines

CASTLEHURST LTD

1291 High Road London N20 Tel 01-446 2280 152 Rye Lane Peckham London SE15 Tel 01-639 2205 Stockists of
Sinclair Lynx Atari Commodore BBC

CRYSTAL COMPUTERS AND COMPONENTS LTD

209 Union Street Torquay Devon TQ1 4BY Tel 0803 22699
We are open 6 days a week 9 30 to 5 30 ½ day Wednesday Stockists of Sinclair Dragon Oric Sharp Apple etc
We have our own credit facilities

4 MAT COMPUTING

67 Friargate Preston PR1 2AT
Open 9 till 6 Monday to Saturday We are stockists of VIC 20 Commodore 64 Oric 1 Texas Instruments TI 99 4 Spectrum ZX81 and Dragon BBC software and a wide range of software and peripherals not available anywhere else in Lancashire

LERWICK SHETLAND

Tel 0595 2145
Software Books Accessories Service
Acorn Computer Dragon 32, ZX81 Spectrum VIC 20 CBM-64
Open Mon Sat 4 30-5 30

Sussex Computer Centre
39 High Street
LITTLEHAMPTON
West Sussex Tel 5674
We are stockists of Sinclair VIC Atari, Dragon Oric Lynx Sharp Colour Genie and Texas Instruments
Members of Spectrum Discount Group

Please include my business details in the next available issue of Home Computing Weekly

Business Name

Address

Tel No

Open Hrs

Contact (Office Use Only)

Post To H C W (Shops & Dealers) 145 Charing Cross Rd London WC2H 0EE.

ONLY £12.00

CLASSIFIED ADVERTISEMENT — ORDER FORM

1	2	3
4	5	6
7	8	9
10	11	12
13	14	15

Please place my advert in Home Computing Weekly for weeks.
Please indicate number of insertions required

Private sales — 25p a word Trade — 35p a word

CLASSIFIED DEPT HOME COMPUTING WEEKLY
145 Charing Cross Rd London WC2H 0EE Tel 01-437 1002

Name

Address

Tel No (Day)

The contents of this publication including all articles designs plans drawings and programs and all copyright and other intellectual property rights therein belong to Argus Specialist Publications Ltd. All rights conferred by the Law of Copyright and other intellectual property rights and by virtue of international copyright conventions are specifically reserved to Argus Specialist Publications Ltd and any reproduction requires the prior written consent of the company

1983 Argus Specialist Publications Ltd

ISSN 0264-4991

MAIL ORDER PROTECTION SCHEME

If you order goods from Mail Order Advertisers in this magazine and pay by post in advance of delivery, this publication will consider you for compensation if the advertiser should become insolvent or bankrupt provided

1. You have not received the goods or had your money returned and
2. You write to the publisher of this publication explaining the position not earlier than 28 days from the day you sent your order and not later than 2 months from that day

Please do not wait until the last moment to inform us When you write we will tell you how to make your claim and what evidence of payment is required

We guarantee to meet claims from readers made in accordance with the above procedure as soon as possible after the advertiser has been declared bankrupt or insolvent to a limit of £1 800 per annum for any one advertiser so affected and up to £5 400 p a in respect of all insolvent advertisers. Claims may be paid for higher amounts or when the above procedures have not been complied with at the discretion of this publication but we do not guarantee to do so in view of the need to set some limit to this commitment and to learn quickly of reader's difficulties

This guarantee covers only advance payment sent in direct response to an advertisement in this magazine (not for example payments made in response to catalogues etc received as a result of answering such advertisements)

CLASSIFIED ADVERTISEMENTS ARE EXCLUDED

'NOW WIN THE POOLS'

THIS IS MEANT FOR YOU — ESPECIALLY IF YOU USE A SINCLAIR ZX81 or SINCLAIR SPECTRUM COMPUTER or even ANY COMPUTER

HAVE YOU EVER HAD THAT DREAM OR EVER WISHED THAT YOU HAD "WON ON THE POOLS" - AT LAST YOU CAN TURN IT INTO A REALITY'

THERE IS A SECRET OF HOW TO WIN ON THE FOOTBALL POOLS IT CAN BE DONE I DISCOVERED THE SECRET A LONG TIME AGO NOW, FOR THE FIRST TIME I'M PREPARED TO SHARE IT WITH YOU

HOW DOES THIS INTEREST YOU I HAVE DOCUMENTARY EVIDENCE BY WAY OF POOLS WINNINGS DIVIDEND SLIPS CANCELLED CHEQUES, etc, SHOWING MY PRESENT WINS ON THE POOLS AS FOLLOWS

First Dividends	Second Dividends	Third Dividends	Fourth Dividends	Fifth Dividends	Sixth Dividends
765	1,818	2 842	1,952	631	93

A GRAND TOTAL OF 8,201 (EIGHT THOUSAND, TWO HUNDRED AND ONE DIVIDENDS so far)
I HOLD THE UNCHALLENGED RECORD FOR THE POOLS WINS

I AM MAKING THIS VERY SPECIAL REDUCED PRICE OFFER TO READERS OF HOME COMPUTING WEEKLY FOR A LIMITED PERIOD ONLY

Do not let anyone tell you that it is impossible to 'WIN ON THE POOLS' — since I perfected my method, I HAVE WON REGULARLY for over TWENTY FIVE YEARS — proof that it is no flash-in-the-pan

I have CHALLENGED THE WORLD with my record of wins and with all the evidence that I possess — NO ONE has ever been able to accept the Challenge — I KNOW NO ONE EVER WILL

MY SECRET IS NOW PLACED ONTO COMPUTER CASSETTE FOR YOU

THE METHOD IS THE GREATEST TREBLE CHANCE WINNER IN THE HISTORY OF FOOTBALL POOLS — IT WILL LAST FOREVER — BOTH FOR ENGLISH AND AUSTRALIAN FOOTBALL POOLS, WITH EQUAL SUCCESS

I now intend to give a limited number of people the opportunity of making use of my method — perfected over 25 years and proving itself on EVERY ONE OF THOSE TWENTY-FIVE YEARS

You will have noted details of my personal achievements so far, as given to you above

A GRAND TOTAL of 8,201, yes 8 201 POOLS DIVIDENDS, including 765 FIRST DIVIDENDS

My Pools Winnings Dividend slips now number so many that they fill a very large suitcase and will stand as my evidence of all claims in ANY COURT OF LAW IN THE WHOLE WORLD

Taking just the past 25 years into consideration, I have won ON AVERAGE over 328, (THREE HUNDRED AND TWENTY—EIGHT) Pools Dividends EVERY YEAR — or — AN AVERAGE of over SIX DIVIDENDS EVERY WEEK for TWENTY—FIVE YEARS

You have my absolute Guarantee of the complete authenticity of every claim, cheque, document, letter, etc, contained herein.

I do have losing weeks but ON AVERAGE my winnings show over SIX DIVIDENDS EVERY WEEK for the past 25 years

I know that you are now utterly flabbergasted. It always happens to everyone with whom I come into contact. Please just sit back and imagine for a moment my FIRST DIVIDEND wins alone. They now number 765 (seven hundred and sixty five) and will probably be even more by the time this advertisement appears in print

I AM NUMBER ONE IN THE WORLD AND NO ONE DISPUTES IT

For as long as I continue to enter the Football Pools my wins will continue. I have already said, they apply with equal success to both English and Australian Football Seasons

I intend to release a STRICTLY LIMITED NUMBER of copies of my cassette, (ie that for Sinclair ZX81 or Sinclair Spectrum) — DO NOT DELAY AND FIND YOU ARE TOO LATE in which case I would have to refund your money

I am so confident of YOUR success that if do not win at least THREE FIRST TREBLE CHANCE DIVIDENDS in the first 20 weeks of entering I will completely cancel the balance of the purchase price and you do not have to pay me another penny at any time, no matter how vast your winnings

I only wish that space would allow me to give you photographs of my winnings slips, cancelled cheques, etc but it is of course impossible — they now number 8 201 dividends. I have however given JUST A FEW EXTRACTS from ORIGINAL LETTERS I hold from my small Clientele

I am the Inventor and Sole Proprietor of my method, Registered as EUREKA — (I have found it!) I am known as The Professor in Pools Circles — I am of the Highest Rank in Forecasting — this is beyond dispute. I am marketing a limited number of Computer Cassettes under my Registered Company — FOOTBALL ENTERPRISES

My initial charge for a copy was £75, but for this SPECIAL REDUCED PRICE OFFER I will send you a copy (for ZX81 or Spectrum) for £20 (twenty pounds) ONLY, plus your Promise to pay me the balance of £55 — ONLY IF YOU WIN AT LEAST THREE FIRST TREBLE CHANCE DIVIDENDS IN YOUR FIRST 20 WEEKS OF ENTERING — otherwise you owe me NOTHING FURTHER

This is surely proof absolute of my supreme and utter confidence in my own abilities and in the capabilities of my discovery. I could easily CHARGE £2 000 per cassette on the evidence I possess, but that would not be fair to everyone, which is what I want to do

My method is WORLD COPYWRIGHT, any infringement and immediate proceedings will be taken, without prior warning. It is truly ingenious and has stood the test of time.

My cassette is simplicity itself to operate and you'll be given FULL DETAILS for weekly calculating. Your entry need not involve you in any large weekly stakes, you can enter for as little as 25p, if you wish.

I charge NO COMMISSION on any of your wins — no matter how BIG they may be

I realised a long time ago, that it was no good sitting down and dreaming about winning the pools, so I burnt the candle at both ends, working late into the night, occasionally RIGHT THROUGH THE NIGHT. I KNEW there was a way, eventually it all paid off and has been doing so ever since

I am unable to vary my offer to anyone, so please do not request it, as I shall very soon dispose of the cassettes I have prepared and am making available.

IMMEDIATELY I perfected my method I commenced winning right away (first with but a little £16, the first week I used it), I HAVE NEVER LOOKED BACK SINCE, amongst all those dividends was one for over EIGHT THOUSAND POUNDS for just one eighth of a penny stake

I will release a copy on cassette, to you, on receipt of the completed order form and your Signature thereon confirming you will treat it in the STRICTEST CONFIDENCE between us and retain it for your OWN USE ONLY.

PLEASE NOTE:
If you happen to be the proud owner of a Computer, other than a Sinclair ZX81 or Sinclair Spectrum you can still purchase a copy of my method, for the same price and program it YOURSELF on to YOUR OWN COMPUTER

Don't take my word for it, read what people write about me and my method.—

I won on Zetters last weekend. It was not a big sum, but all the same it was a very nice surprise for me
J.C., Lancs

I appreciate the straightforward method you adopt which is such a contrast to the rubbish of misrepresentation which is so common in the Betting World, by unscrupulous and self-opinionated charlatans
C.H., Devon

Winnings cheque received today, sincere thanks
D.N., Devon

I congratulate you on your achievement
R.R., Wales

I should like to thank you for a more exciting season and look forward to hearing from you again
J.C., Hants.

I would like to acknowledge cheque and say how much I appreciate your integrity
J.M., Rowland

Many thanks for your system, it is all you say and more
J.C., Lancs

Your wonderful system won me £2 527. I intend to visit London soon and will be able to come and see you personally.
(Overseas Client) P.M. Kampala

Many thanks for trying so hard to please us all, your brother should be thanked also. One of our daughters, WHOSE HUSBAND YOU HELPED ENORMOUSLY has just phoned, the four of them have just spent a lovely holiday in Spain
K.R., Isle of Man

I sent in my FIRST entry last week and won 2nd and 3rd dividends, as you will see from the enclosed certificate. One more and I would have collected over £400 for FIRST dividend. Once I've won a fair amount I shall be staking from winnings and at 2p per line, A FIRST DIVIDEND last week at she would have now won £2,000
C.A., Yorks

I am very interested indeed and enclose £20 herewith. I agree to pay you the balance of £55 ONLY if I win at least THREE FIRST TREBLE CHANCE DIVIDENDS in my first 20 weeks of entering — otherwise I owe you NOTHING FURTHER at any time — no matter how much money I win. My Signature below is my Undertaking to retain complete and absolute confidence about the method.

Name

Address

Signature HCW19

The Managing Director,
Football Enterprises,
'Avon',
8 New Road,
Haverfordwest, Pembs

Please tick if cassette is for
Sinclair ZX81 (16K) ☐
Sinclair Spectrum (48k) ☐
Any other Computer ☐

VIC20 GAMES
FROM
QUICKSILVA

QUICKSILVA are proud to introduce Skyhawk written by Chartec for the VIC20 personal computer, many more amazing games to come!

SKYHAWK: Features Multi-colour, Hi-res 3-D [illegible] Graphics, [illegible] Landscape, Aircraft Landing and Refuelling, [illegible] Aircraft, [illegible], High Score Save, Full Sound Effects, [illegible] Aircraft, Future Line at 3000 yds, Fuel Low Warning, [illegible] Explosions. For the VIC20 + 3K or 8K expansion + joystick.

TORNADO
VIC20 GAMES FROM
QUICKSILVA

VIC20
+ JOYSTICK

TORNADO is in the [illegible] of the Colony [illegible] [illegible] you have three [illegible] [illegible] Features Full Colour Hi-res Graphics [illegible] [illegible] [illegible] Explosions by Chartec for the unexpanded VIC20 + joystick.

PIXEL GAMES

HARVESTER & BRAINSTORM
A cut-throat strategy game [illegible] [illegible] [illegible] [illegible] for one to four players. For the unexpanded VIC20.

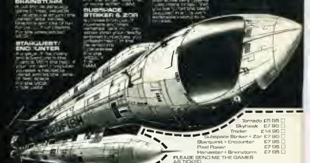
STARQUEST/ ENCOUNTER
A voyage of discovery and adventure in the [illegible]. With the help of your on-board computer you seek a habitable planet amidst the [illegible] of deep space. For the VIC20 + 16K RAM.

PIXEL POWER
A graphics workshop [illegible] [illegible] features built-in Create, [illegible] [illegible] and View [illegible]. For the VIC20 with 8K or more expansion RAM.

SUBSPACE STRIKER & ZOR
It comes from out of nowhere and then vanishes back into [illegible]. With your deadly [illegible] torpedoes you unleash havoc in the [illegible] spacelanes. For the VIC20 + 16K RAM.

TRADER
A trilogy of 16K programs that combine to give an epic 48K adventure. As a galactic trader you deal with some very [illegible] customers [illegible]. You [illegible] [illegible] [illegible] in a [illegible] very extensive instruction booklet.

For the VIC20 + 16K RAM



Please send your orders to
QUICKSILVA LIMITED
[illegible]
[illegible]
SOUTHAMPTON
TEL [illegible]

Tornado	£5 95	☐
Skyhawk	£7 95	☐
Trader	£14 95	☐
Subspace Striker + Zor	£7 95	☐
Starquest + Encounter	£7 95	☐
Pixel Power	£7 95	☐
Harvester + Brainstorm	£7 95	☐

PLEASE SEND ME THE GAMES AS TICKED
Total cheque/PO enclosed ________
Cheque payable to Quicksilva Limited

NAME

ADDRESS

SUPPLIED ON CASSETTE

WARNING: These programs are sold accord ing to QUICKSILVA Ltd's terms of trade an conditions of sale. Copies of which ar available on request